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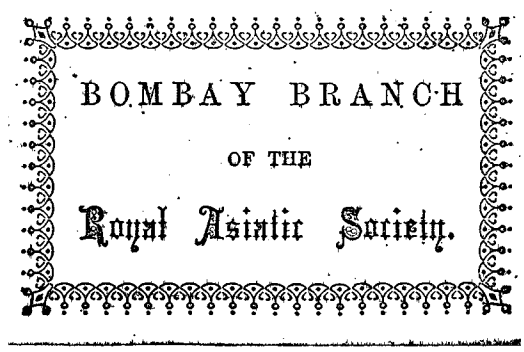

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EAST INDIA (FAMINE)

ADMINISTRATION

OF

FAMINE RELIEF

IN THE

UNITED PROVINCES OF AGRA AND OUDH

DURING THE

Years 1907 and 1908.

Presented to both Houses of Parliament by Command of His Majesty.

LIBRARY OF THE BOMBAY BRANCH OF THE ROYAL ASIATIC SOCIETY

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Government of the United Provinces of Agra and Oudh.

NARRATIVE AND RESULTS OF THE MEASURES ADOPTED FOR THE RELIEF OF FAMINE DURING THE YEARS 1907 AND 1908.

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MAP

OF

UNITED PROVINCES OF AGRA AND OUDH,

showing the intensity of the distress which prevailed in certain districts in 1907-8, as based on the percentage of people relieved in each of these districts to the district population at the time of greatest distress.

GROUP.	District.	Percentage of relieved to population.
I (over 20 per cent.)	Bahraich	24·8
	Jalaun	20·7
	Banda	20·3
II (20 to 10 per cent.)	Mirzapur	19·2
	Gonda	12·
	Kheri	11·8
III (10 to 5 per cent.)	Hamirpur	7·9
	Sitapur	7·5
	Allahabad	5·7
	Bara Banki	5·2
IV	Jaunpur	5 to 2 per cent.
	Mutra	
	Etawah	
	Basti	
	Jhansi	
	Hardoi	
	Sultanpur	
	Fyzabad	
	Fatehpur	
V	Dehra Dun	2 and under.
	Agra	
	Farrukhabad	
	Mainpuri	
	Etah	
	Bareilly	
	Bijnor	
	Budaun	
	Moradabad	
	Shahjahanpur	
	Pilibhit	
	Cawnpore	
	Benares	
	Ghazipur	
	Ballia	
	Azamgarh	
	Almora	
	Garhwal	
	Lucknow	
	Unao	
	Rae Bareli	

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Government of the United Provinces of Agra and Oudh.

(SCARCITY DEPARTMENT.)

NARRATIVE AND RESULTS OF THE MEASURES ADOPTED FOR THE RELIEF OF FAMINE DURING THE YEARS 1907 AND 1908.

No. 2107/I of 1908.

RESOLUTION.

Scarcity Department.

Dated Naini Tal, the 14th October 1908.

Read—

Communications under various dates from Commissioners of divisions, district officers, and Superintending Engineers in whose jurisdiction famine prevailed during 1907-08, reporting on the organization, progress, termination and results of relief operations carried out under their supervision and control.

Introduction.—The United Provinces of Agra and Oudh cover an area of 107,164 square miles and at the last census in 1901 contained a population of 47,691,782. In addition the native states of Tehri and Rampur cover an area of 5,089 square miles with a population of 802,097. Within the last twelve months the whole of this area has been affected more or less seriously by crop failure consequent upon the failure of the monsoon rains of 1907, and relief operations have been found necessary over an area of 66,000 square miles containing a population of nearly 30 millions. As relief operations have now terminated with the harvesting of the autumn crop the Lieutenant-Governor desires to review the measures which have been taken for the relief of distress during the past year.

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CHAPTER I.

The antecedent conditions of the famine.

2. The importance of the antecedent conditions in determining the result of a season of drought has long been recognized. It was shown by Mr. Girdlestone in 1868 in his report on past famines in the North-Western Provinces that the famines of 1783, 1803, 1837 and 1860 were caused by the drought not of one season, but of several. The agricultural facts of those times are not, however, on record in a form available for comparison, and even for the famine of 1877 there exists no sufficiently detailed narrative to show the influence of the preceding seasons on the incidence of distress. The last occasion on which this province was visited by a widespread famine was in 1896-97, and it is instructive to make a comparison of the seasons preceding the rains of 1896 and 1907 respectively.

3. The antecedent conditions of the famine of the earlier period are described in the first chapter of the resolution on the administration of famine relief during 1896 and 1897. The leading feature is that the two years of drought which then occurred were preceded by a prolonged period of excessive rain. Both spring and autumn rains were in excess in 1893 and 1894, while the spring of 1895 was again wet and cloudy. During these seasons practically no crop did well except rice and sugarcane. Wheat and oilseeds suffered acutely from rust and insect attacks in each successive spring; while the interference with tillage, the inopportune or excessive rainfall of the autumn, and the unusual floods resulted in a very poor yield of the chief food crops of the people. But the rice crop was an exception, and in reading through the district reports of these years it is usual to find that while other autumn crops were almost worthless, rice was described as "above the average," or as "an exceptionally good crop." This period then was much less unfavourable to the great rice districts in the north of the province than to the south and centre where dry crops are more largely grown.

With the spring of 1895 the series of wet seasons came to an end. The autumn rains in that year were light and offered little hindrance to tillage but in most places they ceased prematurely, and while the drought damaged all the later crops to some extent, it was most injurious in those rice districts which were not visited by rain in September. The spring crop of 1896 was sown on a reduced area and on land that was more than usually dry; the winter rains were light and irregular, and while the irrigated crops were satisfactory the

remainder were poor, and practically one-third of the expected gross income of the season was lost.

The effect of this series of bad years was visible before the final drought of 1896. Test works were opened in the Rae Bareli, Sitapur and Hardoi districts in the summer of 1895, and large remissions and reductions of revenue were made in Bundelkhand. In the following year regular famine operations became necessary in Bundelkhand; Hardoi too was distressed, and minor relief measures were also required in the Pilibhit, Garhwal and Almora districts.

Thus, when the drought of 1896 was definitely established, there were strong grounds for apprehension of distress in all parts of the province except the protected portions of the districts situated between the Ganges and the Jumna and some of the rice country in the north; Bundelkhand and Central Oudh were indicated as the regions most seriously affected.

4. The history of the years preceding the drought of 1907 is widely different and has determined a widely different distribution of distress. In January 1905 the province as a whole was highly prosperous. A series of good seasons had preceded, while the autumn rains of 1904 had been exceptionally favourable to all parts except Bundelkhand, where they were too heavy at first and too light at the end. A large area was sown with spring crops, and their prospects were on the whole favourable until the unprecedented frost wrought a complete change in the position in the course of three nights. The north, east and west escaped the full force of this calamity, but in the south and centre it was intensely severe, and for the entire province the loss in the gross produce of the spring season was approximately one-third of the whole. The autumn rains in 1905 were not unfavourable at the outset, but deficiencies in the later months gave rise to anxiety for a large part of the province. Rain at the end of September reduced this area materially, and the loss was eventually serious only in the country along and south of the Jumna and in the Unao district. There was also a general want of moisture for sowing the spring crops, and the winter rains were late. When they came in February they were useful, but in Bundelkhand large areas were past sowing. Eventually the spring crops of 1906 were good in Oudh and Kumaun, and fair in most other divisions, but poor in the Muttra and Agra districts and bad in Bundelkhand. In this year relief operations were required in Bundelkhand, the south of the Cawnpore district, and parts of the Muttra, Agra and Etawah districts. The autumn rains of 1906 were quite unusually favourable in the greater part of the province, and in Bundelkhand in particular they were almost ideal. A storm in the country between Muttra and Bareilly caused considerable injury to the tall millets, the area affected being not far

short of a million acres, but a more important exception to the general prosperity occurred in the divisions of Benares, Gorakhpur, and Fyzabad, which suffered first from excess and later from defect of rain. The Gogra and its tributaries were for some time in high flood and the injury to the crops in the Kheri, Gonda, Bahraich, Basti and Gorakhpur districts was very great, greater in some cases than was realised at the time. The drought of September which ensued was disastrous to the late rice in the same districts and also in the rest of the divisions specified. The position in the extreme east had now become critical, and temporary relief was required in the Gorakhpur district.

The same areas had difficulty in sowing the spring crops of 1907, and the winter rains were disappointing throughout the province. During December and January they were partial and inadequate, while February, March and April were unseasonably wet, and wheat and oilseeds suffered severely. Bundelkhand, however, escaped these losses, and secured a second favourable harvest.

5. It will be seen from the foregoing summary that it is not possible to generalize regarding the position of the province in the summer of 1907. There had not been a series of generally calamitous seasons such as preceded 1896, and different regions had been affected in very various ways by the accidents of season which had occurred. The summary therefore requires to be supplemented by a more detailed examination of the conditions prevailing in the various regions where distress was severe in the earlier or in the later period. The materials for this examination are fairly satisfactory for the later period, as the estimates of yield are referable to a definite standard, and if weighted by the area sown with each crop they give an estimate for each harvest as a whole, which though not absolutely accurate is near enough the truth to be used in comparisons between different seasons and between different districts. In using them, however, it is necessary to remember that they are still defective as absolute statements owing to the tendency of the estimators not to go far enough at either end of the scale; good harvests are under-stated while bad harvests are over-stated. But for the earlier period it is not possible to calculate corresponding numerical estimates of each harvest: the district numerical estimates were then not referable to any definite standard, and are most misleading if read by themselves; and it becomes necessary to rely on the verbal estimates which are naturally vague and in some cases are open to question.

Kumaun and the hill portions of Dehra Dun.

6. Taking first Kumaun, with which may be classed the hill portions of the Dehra Dun district in the Meerut division, it has already been indicated that there was some scarcity in the summer of 1896. The hills had escaped most of the calamities which afflicted the

plains, but for some seasons the crops had been below the average. The spring crop of 1896 suffered severely from drought and was described as poor or very poor. Fortunately the drought of the autumn of 1896 fell lightly on this tract; had it set in earlier there was every reason to expect serious distress.

The years 1905 and 1906 were almost uniformly favourable to Kumaun, but the spring crops of 1907 suffered considerably from the untimely rains. On the whole then Kumaun was in a better position in the summer of 1907 than in that of 1896.

7. The history of the districts in the Meerut division excluding the hill portions of Dehra Dun is summarized in the margin for the seasons antecedent to the drought of 1896. This tract was not seriously affected by excessive rain, the wet seasons being less noticeable here than in the south and east; they were however sufficiently wet to enable cultivators to dispense with canal irrigation on a large scale, and were therefore more profitable than the records of the harvest would suggest.

Meerut division, excluding the hill portions of Dehra Dun.

1894...	Spring harvest...	Good.
	Autumn harvest	Moderate.
1895...	Spring harvest...	Moderate.
	Autumn harvest	Fair.
1896...	Spring harvest...	Fair.

For the later period, the rough condition figures are shown on the margin separately for the north and south of the division. The frost of 1905 was felt severely in the Aligarh district and to a less extent in the Bulandshahr district, but the rest of the tract was little hurt; the drought of that autumn on the other hand was felt more severely in the north than in the south. The spring crops of 1906 were better in the north; and in the autumn again the north was more prosperous as the September storm affected Aligarh. The spring crops of 1907 were fairly satisfactory throughout, but much below what was anticipated before they were damaged by heavy rain when they were ripening.

100 *denoting normal yield.*

		North.	*South.*
1905	Spring harvest	90	73
	Autumn harvest	62	80
1906	Spring harvest	90	80
	Autumn harvest	98	87
1907..	Spring harvest	85	90

There is not therefore any very material difference between the position of this tract at the commencement of the earlier and the later drought; but in the first period the cultivators had saved a large amount of money by being able to dispense with irrigation, while the crops of the second period had required greater expenditure than usual on this account.

8. The harvest in central and western Rohilkhand in the seasons preceding the drought of 1896 appear on the whole to have been fairly uniform. The spring crops of 1894 were moderate to good, but those of the autumn were poor with the important exception of rice. The spring harvest of 1895 was poor everywhere, and the autumn crops were below the average

Rohilkhand division excluding the Shahjahanpur and Pilibhit districts.

but not to a serious extent; while the yield in the spring of 1896 was moderate to poor.

The history of the later period is indicated by the condition figures given in the margin. The frost of 1905 was little felt except in the Budaun district, but the drought in the following autumn reduced the yield by about one-fourth. The spring crops of the next year were little better, the Moradabad district faring worst, but the autumn yield was fully up to the normal. The spring crops of 1907 were not seriously injured except in the Bareilly district; and on the whole the condition of these districts was probably about the same in the two periods under consideration.

1905	Spring harvest	... 85
	Autumn harvest	... 75
1906	Spring harvest	... 78
	Autumn harvest	... 100
1907	Spring harvest	... 85

Bundelkhand.

9. It is unnecessary to recapitulate in detail the history of Bundelkhand before 1896. In the words of Lord MacDonnell's resolution, "Since the autumn of 1893 the outturn of the autumn crops had been uniformly poor while that of the principal spring crop had been worse." The tract was already suffering from widespread distress when the drought of 1896 occurred.

The history of the later period is different as the rough condition figures on the margin will show. The spring crops of 1905 suffered very severely from frost, the autumn crops from drought, and the spring crops of the following year from the same cause. The year 1904 had, as already indicated, been less favourable here than in the rest of the province, and distress became apparent in the spring of 1906. So far the conditions were sufficiently familiar in this unfortunate tract, but the autumn harvest of 1906 was perhaps the finest within living memory, and the crop of the following spring was entirely satisfactory except in part of the Banda district. Thus from the agricultural point of view, and without taking into account fiscal changes and the extension of facilities for irrigation, Bundelkhand was in a considerably better position to face the drought of 1907 than it occupied in 1896.

1905	Spring harvest	... 45
	Autumn harvest	... 50
1906	Spring harvest	... 35
	Autumn harvest	... 110
1907	Spring harvest	... 95

Marginal Bundelkhand.

10. It is convenient to consider the districts of Cawnpore and Fatehpur along with Bundelkhand: when distress occurs, it is most severe in the south of these districts which agriculturally resemble the Bundelkhand plains across the Jumna. Allahabad cannot be considered separately as a district. Part of it is in Bundelkhand, part is situated between the Ganges and the Jumna and part is similar to South Oudh; and what is said of these tracts must be applied to the corresponding portions of the district. Cawnpore and Fatehpur shared in the general calamities of the years before 1896, but not to the same extent

as Bundelkhand proper. The five seasons beginning with the spring of 1894 are described as fair, poor, poor, moderate and moderate; and it may be said that for the four seasons preceding the drought there had been a steady decline in prosperity.

The rough condition figures for the seasons before 1907 are given in the margin, and it will be seen that the course of affairs was on the whole similar to that in Bundelkhand. The frost of 1905 did more harm in Fatehpur than in almost any other district, and the drought in the following autumn caused considerable loss. The spring harvest of 1906 was however much better than in Bundelkhand proper, owing to the greater facilities for irrigation; and the next two seasons gave no cause for complaint. This tract, therefore, like Bundelkhand entered on the recent drought in a much better position than that of 1896. The extension of canals in the southern half of the tract is in this case a very material feature: the Fatehpur branch of the Lower Ganges Canal was under construction in the earlier drought, and since then the extensions in the south of the Cawnpore district have wrought a marked and permanent change in the economic position.

1905	Spring harvest	40
	Autumn harvest	65
1906	Spring harvest	75
	Autumn harvest	105
1907	Spring harvest	90

The Mirzapur district must also be treated as a part of marginal Bundelkhand. Distress here is usually most acute in the uplands which resemble Bundelkhand in the absence of facilities for irrigation, but differ considerably in the soils and the system of cropping. The reports for this district in the years preceding 1896 are meagre, but the yield of five successive harvests may be described as disappointing, very poor, bad, fair and poor.

The condition figures for the second period are given in the margin. The district lies outside the area of maximum damage by frost, and it escaped the worst of the drought in the autumn of 1905, but still this year was on the whole unfavourable. The spring crop of 1906 was probably considerably worse in the uplands than is suggested by the condition figure which takes account of the irrigated lowlands; while the autumn crop was somewhat affected by the September drought of the east of the province. The spring crop of 1907 was almost up to expectations, and on the whole it may be said that the district was in a slightly better position at the beginning of the rainy season of 1907 than at the same period in 1896.

1905	Spring harvest	71
	Autumn harvest	77
1906	Spring harvest	84
	Autumn harvest	86
1907	Spring harvest	90

Agra division.

11. The bulk of the districts of Farrukhabad, Mainpuri and Etah lies outside of the area where distress is expected, and attention may be concentrated on Muttra, Agra and Etawah, the southern portions of the last two districts being the most precarious.

Judging by the old reports, which are summarized in the margin, the seasons preceding 1896 were less unfavourable than elsewhere, but the reports are in several cases vague and contradictory and much stress cannot be laid on them. A special feature of this area was the success of the cotton crop in 1895 and of the irrigated wheat and oilseeds in 1896. It was pointed out at the time that these crops had brought a great deal of money into the country.

1894 { Spring harvest Good. Autumn harvest Bad.
1895 { Spring harvest Fair (poor in Muttra). Autumn harvest Moderate.
1896 Spring harvest Poor (fair in Agra).

The rough condition figures of the later period are shown on the margin. The Etawah figures refer to the whole district, as separate information is not recorded for the southern tract. The districts under consideration suffered severely in 1905, first from frost and then from drought: the spring crops of 1906 were also bad and in this year relief measures were necessary. The autumn crops of that year were however good, although the September storm did some harm in Muttra reducing largely the yield of what promised to be an exceptionally fine millet crop and except in Etawah there was not much to complain of about the spring crops of 1907. Agriculturally then the position of this tract with the exception of the Muttra district was slightly better in 1907 than in 1896; while there had been considerable extensions of the canal system in the interval.

		Muttra.	*Agra.*	*Etawah.*
1905	Spring harvest	62	65	68
	Autumn harvest	48	57	74
1906	Spring harvest	50	60	72
	Autumn harvest	94	98	107
1907	Spring harvest	89	96	79

12. Turning now to the country on the north of the Ganges, attention may be directed in the first place to the Benares division with the district of Azamgarh. The Ghazipur and Ballia districts may be left out of account as scarcely affected by distress beyond the ordinary results of high prices. In the remaining districts rice occupies about half the area sown with autumn crops, late rice being rather more important than early. The history of the seasons before 1896 is given in the margin. It will be seen that two out of the three spring crops were very poor, while the two autumn crops were moderate, rice alone being good in the first, and bad in the second season.

Benares division with Azamgarh.

1894 { Spring harvest Very poor. Autumn harvest Very poor, except rice.
1895 { Spring harvest Very poor. Autumn harvest Good, except rice.
1896 Spring harvest Fair.

Rough condition figures for the second period are given in the margin. The frost caused substantial loss in the spring of 1905; the next two seasons were on the whole fair but the autumn of 1906 was unsatisfactory, the drought being felt severely, and the spring crops of 1907 were again

1905	Spring harvest ...	... 5
	Autumn harvest ...	... 85
1906	Spring harvest ...	... 85
	Autumn harvest ...	... 70
1907	Spring harvest ...	... 80

below the mark. It is questionable whether this tract was much better off in 1907 than in 1896. The rice crop which is of special importance in this area had been bad for several years. This was the case particularly in pargana Ungli of the Shahganj tahsil in the Jaunpur district, where rice occupies nearly two-thirds of the area in the autumn harvest.

South Oudh.

13 It is most convenient to consider together the five districts of Lucknow, Unao, Rae Bareli, Sultanpur and Partabgarh in South Oudh. Hardoi, Fyzabad and Bara Banki are transitional and require separate treatment. The five districts named suffered greatly in the years before 1896, as will be seen from the abstract given on the margin. Though rice is widely grown, dry crops are on the whole more important, and the repeated seasons of excessive rain were marked by a progressive decline in productivity apart from the specific injuries recorded, so that by the summer of 1896 the whole tract was much impoverished, it being remembered that the fair crop of 1896 was sown on a small area. Test works were opened in Rae Bareli during 1895, and though the autumn of that year and the following spring brought some relief the crops were not good enough to restore the prosperity of the people.

1894 ...	Spring harvest ...	Greatly injured.
	Autumn harvest ...	Very poor.
1895 ...	Spring harvest ...	Very poor.
	Autumn harvest ...	Good, except rice.
1896 ...	Spring harvest ...	Fair.

The history of the seasons before 1907 is much brighter. In the condition figures given in the margin the Unao district is separated from the rest of the tract for obvious reasons. The frost of 1905 was disastrous throughout, but in the autumn of that year Unao was seriously affected by the drought which the rest of the tract escaped; and the following spring crops were injuriously affected by the same cause. In 1906 Unao was on the verge of distress while the remaining districts were already on the road to recovery, but in the two remaining seasons Unao did rather better than the rest, and in the summer of 1907 was not much worse off than the other districts. In fact it is probable that the Sultanpur district was in the least satisfactory position of the five, as in the autumn of 1906 it came within the eastern drought area and lost heavily on the rice crop, while in the spring of 1907 rust appears to have been more general than elsewhere. But taken as a whole, the tract was in a far better position agriculturally in 1907 than in 1896.

		Unao.	*Rest of tract.*
1905 ...	Spring harvest	30	85
	Autumn harvest	45	80
1906 ...	Spring harvest	75	95
	Autumn harvest	90	85
1907 ...	Spring harvest	85	85

North Oudh.

14. It is convenient to treat together the districts of Kheri, Gonda and Bahraich, the two latter are distinguished by the absence of facilities for irrigation, by the high proportion

of the area sown with rice, and to a less extent by the popularity of the maize crop to the exclusion of the large millets. Kheri is transitional and exhibits these characteristics to a less extent. In 1906, which was favourable for extended sowings, the autumn area in these districts was distributed as follows:—

	Early rice.	*Late rice.*	*Maize.*	*Other crops.*
Kheri ...	30	4	17	49
Gonda ...	41	26	18	15
Bahraich ...	32	20	31	17

The history of the seasons before the drought of 1896 is given on the margin. It will be seen that Bahraich had no great reason for complaint throughout the period; Gonda had two poor spring harvests, but secured good rice in both autumns; while Kheri with its comparatively small rice area was much worse off than the other two districts.

1894	Spring harvest ...	Fair, except wheat.
	Autumn harvest	Poor, except rice.
1895	Spring harvest ...	Poor (fair in Bahraich).
	Autumn harvest	Fair or good.
1896	Spring harvest ...	Poor (fair in Bahraich).

The condition figures for the second period are given for each district separately. The frost of 1905 was not exceptionally severe in this tract, but about one-fourth of the gross income of the season was lost. Drought affected the rice, which is, as mentioned above, the most important crop in Gonda and Bahraich, in the following autumn, but the yield in the spring of 1906 was satisfactory. The autumn crops of this year were seriously damaged by floods and then by drought in Bahraich and the Tarabganj tahsil of the Gonda district and to a less extent in the rest of Gonda and Kheri; and it is probable that the damage in Gonda was under-estimated. The spring of 1907 was also unfavourable as the rain came when the unirrigated crops had already suffered and was then excessive and injurious. Thus there can be no doubt that Gonda and Bahraich were very much worse off in 1907 than in the earlier period, particularly Bahraich which had only one reasonably good season out of five. The condition of Kheri also was worse than the figures indicate, as the monsoon rainfall for several years preceding 1907 had been in considerable defect, and the position in that district was undoubtedly less favourable than in 1896.

		Kheri.	*Gonda.*	*Bahraich.*
1905	*Spring harvest*	77	73	75
	Autumn harvest	88	85	81
1906 ...	*Spring harvest*	100	97	93
	Autumn harvest	87	81	68
1907 ...	Spring harvest	79	76	78

15. It remains to examine the districts bordering on this tract of North Oudh on the west, the south and the east. On the west lie the districts of Shahjahanpur, Pilibhit, Hardoi and Sitapur. This group suffered very severely in the earlier of the two periods under consideration; of the five seasons, Sitapur admitted one moderate crop, but all the others were very poor or bad. Rice is of less importance in this group than in the Gonda and Bahraich districts: the large millets are common, and the spring,

Hardoi group.

crop is the more valuable of the two. Shahjahanpur got through this period of disaster owing to the relative success of its sugarcane crop, but even in 1895 test works and remissions of revenue were necessary in Sitapur and Hardoi, and in 1896 relief measures were necessary in Hardoi and Pilibhit. Thus the greater part of this tract had no resources with which to meet the drought.

In the later period conditions have been more favourable. The tract suffered seriously from the frost of 1905, slightly from the drought of the same year, and somewhat seriously again from the untimely winter rains of 1907. It cannot be described as prosperous, but it was not practically ruined as was the case in 1896.

		Shahjahanpur and Pilibhit.	*Sitapur and Hardoi.*
1905 ...	Spring harvest	65	50
	Autumn harvest	80	80
1906 ...	Spring harvest	85	90
	Autumn harvest	105	85
1907 ...	Spring harvest	70	75

16. The two districts of Fyzabad and Bara Banki are to some extent transitional between South Oudh proper and the submontane tract across the Gogra. Their history before 1896 is shown in the margin. They were affected almost to the same extent as South Oudh by the series of wet seasons, and the crop harvested in the spring of 1896 was worse than further south for some reason not disclosed in the reports.

		Fyzabad and Bara Banki.
1894 ...	Spring harvest ...	Bad.
	Autumn harvest...	Bad, except rice.
1895 ...	Spring harvest ...	Very poor.
	Autumn harvest...	Good, except rice.
1896 ...	Spring harvest ...	Poor or moderate.

Their condition in the second period is shown for each district separately as the figures do not harmonize ; the districts form a long, narrow strip, and uniformity cannot be expected. Fyzabad suffered comparatively little from the frost, but the next three seasons were affected by the two droughts, and in the spring of 1907 the injury from untimely rains was clearly noticeable. The district cannot have made money; but in 1907 it was probably on the whole better off than in 1896. The case of Bara Banki is striking. The frost of 1905 and the untimely rain in the spring of 1907 were both felt much more severely than in Fyzabad, but the yield in the three intervening seasons was admitted to be up to the normal, and the district must have been somewhat better off in 1907 than in 1896.

		Fyzabad.	*Bara Banki.*
1905 ...	Spring harvest ...	73	56
	Autumn harvest ...	75	100
1906 ...	Spring harvest ...	83	100
	Autumn harvest...	77	101
1907 ...	Spring harvest ...	79	70

17. The two districts of Gorakhpur and Basti escaped the worst effects of the bad seasons before 1896 as will be seen from the marginal abstract; as in the case of North Oudh the autumn of 1894 was redeemed by the fine rice crop, so that there were three fairly satisfactory seasons out of five.

		Gorakhpur and Basti.
1894 ...	Spring harvest ...	Poor.
	Autumn harvest...	Rice above average, rest bad.
1895 ...	Spring harvest ...	Poor.
	Autumn harvest ..	Fair.
1896 ...	Spring harvest ...	Fair.

The history of the later period is also shown in the margin. It is a depressing record without a single good season and the very poor yield in the autumn of 1906 led to apprehensions of serious scarcity, which were fortunately not justified though measures of relief were required for a time during the spring of 1907. There can be little doubt however that these districts were worse off then than in 1896.

		Gorakhpur.	*Basti.*
1905 ...	Spring harvest...	53	77
	Autumn harvest...	72	85
1906 ...	Spring harvest...	78	81
	Autumn harvest...	50	61
1907 ...	Spring harvest...	67	75

18. From the foregoing analysis it would appear that in June 1907 the people of the greater portion of the province were in a better position to face an unfavourable season than was the case in the summer of 1896; but large areas, notably in the eastern districts and North Oudh, were distinctly worse off than in 1896, and their position was such as to give strong grounds for anxiety in the event of another unfavourable season.

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CHAPTER II.

The monsoon rains of 1907 and the failure of the *kharif* or autumn harvest.

19. The normal time for the establishment of the monsoon in the United Provinces is during the third week in June. In 1907 the monsoon entered the province about the usual time, but did not at first penetrate far. Sufficient rain for sowing the early autumn crops was received during the latter half of June in the Benares and Gorakhpur divisions, Partabgarh and part of Sultanpur, Gonda, Bahraich, Pilibhit, parts of Sitapur and Kheri, and in the south of Hamirpur and Allahabad. Throughout the greater part of the province, however, the rainfall of the month was between 80 and 90 per cent. in defect. During the first fortnight of July the weather continued hot and dry, though useful falls of rain were received in the Benares and Gorakhpur divisions, in Fyzabad division (except in Bara Banki and part of the Sultanpur district), and in the districts of Allahabad, Lucknow and Sitapur. Monsoon conditions were not fully established throughout the province until the third week of July. By the end of the month all districts except Lucknow and Bara Banki had received sufficient rain for the time being, although the rainfall for the month was considerably below the normal. Typical monsoon weather continued until the end of August. The distribution of the rainfall, however, was uneven. It equalled or exceeded the normal in the Agra, Allahabad and Benares divisions, but was in considerable defect in the Meerut and Gorakhpur divisions, parts of the Rohilkhand division and throughout Oudh. The deficiency in the eastern submontane tracts was remedied by a final heavy fall in the Gorakhpur and Basti districts; but in the Gonda, Bahraich and Kheri districts the rainfall of the month was quite inadequate for the system of cropping practised in the locality. The monsoon withdrew from the province in the last few days of August, and for all practical purposes the rain in September was confined to the Gorakhpur division (excluding the west of the Basti district) and the districts of Benares, Ghazipur and Ballia, and even there the isolated falls which were received were much less than what is normally expected in September; there were showers elsewhere, but they were not sufficient to be of much use and their value was reduced by the strong and dry westerly winds that prevailed during the month. October and November were perfectly dry, slight showers in the Ballia district and the Dehra hills being the only rain that was recorded.

The net result of this distribution of the rainfall may be stated as follows. The rains lasted for five weeks instead of 12 or 14 in the whole of the Meerut* and Agra divisions, the

* Excluding the hill tracts of the Dehra Dun district, which are more conveniently classed with the hill tracts of Kumaun.

whole of the Allahabad division except a small portion in the south-east, the whole of Rohilkhand except the Shahjahanpur and Pilibhit districts, the whole of the Lucknow division except the Kheri district and part of the Sitapur district, and in the districts of Fyzabad and Bara Banki. The duration was rather longer, approximately eight weeks, in Kumaun, a small part of the Allahabad division, and the Mirzapur, Jaunpur, Kheri, Gonda, Bahraich, Sultanpur, Shahjahanpur, Pilibhit and Partabgarh districts. Finally in the rest of the Benares division and in the Gorakhpur division the season approximated to a type not unfamiliar in recent years, that in which the rain lasts long enough to secure fair crops of all staples except rice. The accompanying diagrams, which have been prepared for nine typical districts illustrate the three groups into which the districts of the province may be divided with reference to the distribution of the monsoon rainfall. In the first as in Muttra, Bulandshahr, Budaun, Jalaun and Bara Banki, the sowing season was a month late, and the growing season a month or more short. In the second as in Bahraich, Jaunpur and Shahjahanpur, the sowing season was nearly normal, but the growing season again a month or more short. In the third as in Ballia the sowing season was normal and the growing season was curtailed but to a less extent.

The inequalities of distribution were remarkable even within the limits of the same district. Almost all district officers reported that the rainfall varied in the most unusual manner from one portion of the district to another, from village to village, and even from field to field. A storm in September for instance saved the rice crop in about 250 square miles of the Gorakhpur district without affecting the rest of the district, and a similar storm in the Gonda district never reached the country south of the river Rapti.

Comparing the rains of 1907 with those of 1896, the striking point is the greater uniformity of the earlier season. The rains began everywhere in June 1896 and practically ceased at the end of August everywhere except in Kumaun, parts of the Benares division and the Bahraich district. In that year then nearly the whole of the province fell into the second of the groups described above, that is a normal seed time and a growing season seriously curtailed. As regards distribution of the rainfall 1907 was the more unfavourable season of the two, as in the great majority of districts the monsoon both began late and ended early. As regards the total rainfall—though this is of less importance than its distribution—the deficiency was decidedly greater in 1907 than in 1896. The deficiency throughout the province averaged in 1907 one-third to one-half of the normal fall: it was most serious in the three submontane districts of Oudh (Kheri, Gonda and Bahraich), where the rainfall in 1896 had been almost normal, and in the Meerut and Bulandshahr districts.

It was observed at the end of 1907 that the country as a whole appeared much drier than it had been for many years. This was noticeable everywhere but particularly in the hills. Within the last five years there have been two years of drought, 1905 and 1907, and the remaining years 1903, 1904 and 1906 were years of normal but not excessive rainfall. The net result is that the average annual fall for the five years 1903 to 1907, compared with the normal annual fall calculated for the preceding twenty-five years, was in defect in all districts except Benares, Ghazipur and Gonda, where it was in slight excess. The average annual defect exceeded 12 inches in the Pilibhit district, 10½ inches in the Kheri district and 7 inches in the Saharanpur, Bareilly, Moradabad, and Rae Bareli districts and throughout the Kumaun division.

20. The delay in the arrival of the rains in 1907 suggested that the area sown with autumn crops might be considerably short of the normal, but as a matter of fact this result followed only in the Saharanpur and Naini Tal districts and in Bundelkhand. The people made the most of their opportunities and the amount of labour that they succeeded in putting into their fields during the very short time for which the monsoon lasted was quite wonderful. As the result of their efforts the area sown was actually almost 4 per cent. in excess of the normal for the province as a whole. It is a striking fact that the largest relative areas were sown in the middle of the tract situated between the Ganges and the Jumna rivers where the rains were very late; a partial explanation is to be found in the steady extension of the practice of sowing cotton and some other crops with irrigation. Apart from this tract the largest relative areas were sown in the Shahjahanpur and Kheri districts where the sowing season was not seriously abnormal.

In 1896 also a large area was sown with autumn crops. In view, however, of the fact that in that year ten districts sent in no crop returns owing to the progress of survey or settlement operations, while the returns of several other districts are vitiated by a misapprehension regarding the treatment of the area of crop failure, it is difficult to compare exactly the area sown in the two years, but there is no doubt that a substantially larger area was sown in 1907 in the face of a less favourable sowing-season, a fact which indicates the growth of the resources of the people during the last decade. During July while the rain was holding off there was a very marked feeling of confidence among the people, and every shower however slight was turned to the utmost advantage in view of the favourable season which was expected.

21. These confident expectations were doomed to disappointment. The drought of September was greater than the crops, already backward in many districts, could withstand and there was as a rule either entire failure or serious loss of outturn. The records of entire failure are not complete, but

MAP

OF

UNITED PROVINCES OF AGRA & OUDH

SCALE OF MILES.

30 0 30 60 Miles

References.

Province or state boundary... ... ...

District ditto ... ...

Famine districts ... ...

Scarcity ditto ... ...

OUTTURN OF KHARIF, 1907.
(Autumn Harvest)

Districts in which the crop was 66 per cent. or more of a normal crop ...

Districts in which the crop was 50 per cent. or more of a normal crop, but below 66 per cent. ... ...

Districts in which the crop was 40 per cent. or more of a normal crop, but below 50 per cent. ... ...

Districts in which the crop was 30 per cent. or more of a normal crop, but below 40 per cent. ... ...

District in which the crop was below 30 per cent of a normal crop ...

Photo-Litho., Government Press Allahabad.

over 3½ million acres out of nearly 24 million sown are known to have failed entirely. The loss exceeded 100,000 acres in Fatehpur, Mirzapur, Jaunpur, Basti, Lucknow, Sitapur, Hardoi, Fyzabad and Bahraich, all important rice districts; in Azamgarh, Kheri and Sultanpur the loss exceeded 200,000 acres, in Bara Banki 300,000 and in Gonda 400,000 acres.

Turning to the crops that gave some yield, it is natural that the "early-dry" group, (maize and the small millets), should have suffered least as they require a very short growing season. These crops gave a yield exceeding three-quarters of the normal in the Benares and Gorakhpur divisions where the season of their growth did not diverge widely from their requirements; and where sown in other divisions they usually gave a substantial though reduced outturn, exceeding half the normal in most districts of the Meerut, Agra and Rohilkhand divisions and in parts of the Fyzabad division. They were, however, very nearly failures in Bundelkhand, the Lucknow division and the districts of Gonda, Bahraich and Bara Banki.

The "late-dry" food crops, (the tall millets and the low pulses), naturally suffer more severely from drought in September, a month which covers the most critical portion of their growing season. Small areas of the millets were saved by irrigation where possible and these gave a moderate or fair outturn, but taking irrigated and dry crops together the only districts that report as much as half a normal yield are Saharanpur, Aligarh, Farrukhabad, Jaunpur, Ghazipur, Ballia, Gorakhpur and Rae Bareli, while Partabgarh is not far short of the same standard. In other districts the yield ranges from 45 per cent. downward to 20 per cent. or even less.

Rice fared still worse. The early varieties yielded something, as much as two-thirds of the normal in the Jaunpur and Gorakhpur districts and from about half the normal downwards elsewhere, but the late rice did not on the whole return the seed, being practically a total loss except in the small areas where it could be saved by irrigation. This process was possible only within reach of the canals, as the streams and lakes were as a rule already dry before the time for the final watering required to mature the crop.

Nor was the loss in foodstuffs made good by a greater yield of other crops. Cotton, sugar and sesamum are the chief industrial crops at this season; as usual the failure of these crops was less pronounced than in the case of foodgrains, but nevertheless the loss was severe and it was not compensated by greatly enhanced prices to the same extent as in the case of grain, although the price of sugar-products was exceptionally high.

22. Any attempt to estimate quantitatively the amount of the loss caused by the drought is beset by considerable difficulties. Four sets of data are essential, the actual areas, the

normal areas, the yield in terms of the normal, and the normal yield itself. The actual areas are known with adequate precision and the normal areas to a fair degree of approximation; but the remaining data are as yet by no means satisfactory. It is well known that even in ordinary years estimates of outturn are affected by the pessimism characteristic of the landholding classes, and this trait is naturally most conspicuous in a drought when the reporters see their season's income withering before their eyes. Official estimators on the other hand are familiar by experience only with that part of the scale which represents a moderate to good crop. The estimated yields therefore are subject to more correction than usual, while the normal yield is still imperfectly known in the case of several autumn foodgrains, especially those that are harvested early, at a time when officers are not on tour. The following table must be read subject to these warnings. It excludes the hill tracts for which areas are not recorded.

Statement showing percentage outturn of the autumn harvest in terms of normal yield on normal area.

District.	1896.	1907.	District.	1896.	1907.
Dehra Dun ...	65	46	Benares ...	25	50
Saharanpur ...	60	42	Mirzapur ...	28	21
Muzaffarnagar ...	62	23	Jaunpur ...	28	62
Meerut ...	88	40	Ghazipur ...	46	39
Bulandshahr ...	83	45	Ballia ...	54	63
Aligarh ...	60	49	Gorakhpur ...	44	71
Muttra ...	40	36	Basti ...	39	43
Agra ...	46	32	Azamgarh ...	17	26
Farrukhabad ...	45	65	Naini Tal (plains only).	49	25
Mainpuri ...	49	47	Lucknow ...	31	19
Etawah ...	51	42	Unao ...	31	25
Etah ...	59	54	Rae Bareli ...	28	32
Bareilly ...	60	40	Sitapur ...	53	19
Bijnor ...	62	16	Hardoi ...	24	41
Budaun ...	53	46	Kheri ...	69	20
Moradabad ...	51	40	Fyzabad ...	36	23
Shahjahanpur ...	38	42	Gonda ...	38	12
Pilibhit ...	37	43	Bahraich ...	59	18
Cawnpore ...	38	40	Sultanpur ...	38	14
Fatehpur ...	27	22	Partabgarh ...	38	34
Banda ...	39	25	Bara Banki ...	38	12
Hamirpur ...	48	21			
Allahabad ...	26	24			
Jhansi ...	50	20	Total, U. P. of Agra and Oudh.	39	31
Jalaun ...	25	11			

23. It will be seen from this table that for the province as a whole the yield of the autumn food crops of 1907 was 31 per cent. of what the people might have counted on securing in a normally favourable season. The season was thus (as the foregoing account of its course has suggested) substantially worse than that of 1896 when 39 per cent. of the normal yield was secured.

The difference is not of course spread evenly over the province. Taking the divisions in order, the drought of 1907

was a calamity in Meerut where 1896 was merely an unfavourable season: the Aligarh district did best in securing almost half a crop but the Meerut and Muzaffarnagar districts suffered losses which are almost unprecedented in the period for which adequate records exist.

The Agra division suffered rather more than in 1896: the Farrukhabad district was exceptionally fortunate, Agra did badly, and the remaining districts were all a little worse than in the previous drought.

In Rohilkhand, the Shahjahanpur and Pilibhit districts were rather better than in 1896, but the other districts were substantially worse, and the Bijnor district with its enormous rice area obtained a very scanty harvest indeed. The adjoining plains of the Naini Tal district suffered almost as badly as the worst of Rohilkhand.

In the Allahabad division, the Cawnpore district alone was more fortunate than in 1896, the remaining districts getting from one-tenth to one-fourth of their expected yields, and in Hamirpur, Jhansi and Jalaun the yield was less than half even of the miserable crops of the earlier famine.

When we come to the Eastern divisions the district figures are less depressing. The Mirzapur district it is true was even worse than in 1896 and Ghazipur was also somewhat less fortunate; Basti was slightly better, and Azamgarh though better was still bad; in Jaunpur the areas which depend almost entirely upon rice, and in particular pargana Ungli of the Shahganj tahsil, lost almost all their autumn harvest, but Benares, Ballia, and most of all Gorakhpur, were able to secure a moderate outturn.

Oudh, however, has again a bad record: the Hardoi district alone did substantially better in 1907 than in 1896, and the figures for the Sitapur and Kheri districts, and practically the whole of the Fyzabad division, show that the drought of 1907 was a much more serious calamity than that of 1896.

24. Translating these proportions into actual quantities of produce, and bearing in mind the warning already given that the figures are liable to considerable error, it appears that the normal yield of the plains, based on the experience of recent years, is rather more than six million tons of foodgrains, (substantially more than was expected in the year 1896): the actual produce was just two million tons and the loss of expected income was over four million tons.* In 1896 the loss was 3⅓ million tons.

Such figures are too great to be easily grasped; there is probably no other country in the world except China where calamities on this scale are possible. One of the best ascertained data of consumption in this province is that one ton

* To facilitate comparison the figures in the text have been worked out on the method adopted by the compilers of the resolution on the famine of 1896-97. A somewhat more appropriate method brings the outturn of 1907 well below two million tons.

of grain will feed five persons for a year; a loss of four million tons involves then the food supply of 20 million persons for a year, or enough to feed the 48 million inhabitants of the province for five months.

But this loss does not indicate the full effects of the drought, for it is necessary to add the losses to the industrial staples—cotton, sugarcane and sesamum. The loss on these crops may be put at 12 crores of rupees or £8,000,000 (cotton $2\frac{1}{2}$ or £1,700,000, sesamum $2\frac{1}{2}$ and sugarcane 7 crores or £4,700,000*). On the whole then the losses of the season may be summarized as five months' food for the province, and twelve crores (£8,000,000) in cash.

The hills are not included in the foregoing calculation as the areas cropped in them are not recorded; nor would their inclusion make any difference to the round figures that have been given. The drought was however disastrous on the small hill-areas concerned, its severity increasing from east to west. In the Chakrata tahsil of the Dehra Dun district the unirrigated crops yielded 25 per cent. or less, while in the Kumaun division they appear to have been substantially below 50 per cent. It is, however, difficult to speak of any of these districts as a whole, since the condition of the crops varies widely from valley to valley, and it is perhaps best to say that while some localities obtained a moderate yield, in the rest the loss was very serious.

* In the case of sugarcane the loss is calculated not (as with other crops) on the normal area, but on the exceptionally large area that had [actually] been sown in the spring and up to August promised an abundant yield.

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CHAPTER III.

Preliminary measures and organization of the relief system.

25. As September passed away without rain the failure of the autumn harvest was inevitable and with the continuance of the drought into October it became certain early in that month that there would be great difficulty in sowing the spring crops. The surface of the plains was already far too hot and dry to serve as a seed-bed, and except in a few favoured localities irrigation was seen to be an indispensable preliminary, while the cost of seed was exceedingly high. Thus it was realised that the expenditure on the spring crops would have to be much greater than usual, at a time when the income of the cultivators had been reduced by two-thirds and when the ordinary forms of credit were seriously contracting. The measures that were taken by Government to provide capital to meet this emergency by means of advances on a most liberal scale for the purchase of seed for the spring crop and for the construction of temporary and of masonry wells for the irrigation of that crop, and the liberal suspensions and remissions of land revenue which were made as soon as the extent of the failure of the autumn harvest could be ascertained are detailed in a later portion of this resolution, but they are mentioned in this place because they were among the earliest of the precautionary measures adopted by the Government and because the liberality and the promptitude of these measures encouraged the people to continue work in the fields and to sow as large an area as possible of spring crops instead of crowding on to relief works. These measures therefore helped to a large extent to delay the necessity for direct measures of relief and should be constantly borne in mind when reading the history of the earlier months of the famine.

26. During October and November preparations were made to meet the serious famine which was now inevitable and the plan of campaign was organized. In the first place district officers were instructed to report by the 25th October, with a supplementary report on the 7th November, on the condition of their districts, estimating the amount of relief which would be required and its probable cost. Wherever the need of poorhouses was anticipated—standing poorhouses being already in existence in a number of the larger cities—district officers were authorized to arrange for their construction and equipment without delay and it was explained to them that the responsibility of deciding when it might become necessary to open test works rested with them. District Boards were advised, in order to make additional employment available, to undertake as early as possible any works which required to be

carried out. In all districts where gratuitous relief was likely to be necessary the arrangement of circles and the preparation of preliminary lists of persons eligible for relief was pushed on, as the need for this form of relief was expected to arise earlier than the need of employment for labourers on relief works. The attention of district officers was particularly directed to the importance, especially in the cities, of enlisting the help of non-official agency for the distribution of Government doles; in all cities and large towns non-official committees were thus formed, who eventually assisted in the scrutiny of the lists and made the distribution of doles to the recipients. In the rural areas, where the kanungo's circle would naturally form the gratuitous relief circle, Commissioners were authorized to appoint assistants on Rs. 15 per mensem to relieve of their ordinary field work supervisor kanungos who were engaged in checking and revising the gratuitous relief lists. All Government forests were thrown open to the people for the collection of edible produce: and all officers in charge of police stations were provided with funds for the relief of casual wanderers. Arrangements also, which will be described in due course, were made for the supply of pressed hay from the forests on indent to districts where a scarcity of fodder was anticipated.

With effect from the 1st November Mr. J. S. Campbell, C.I.E., was appointed Famine Commissioner and during this period of preparation all parts of the province were visited either by him or by the Lieutenant-Governor in person, and conferences were held with the Commissioners and district officers at various centres. One subject which received special attention was the enlistment of suitable staff of various grades. The Inspector-General of Civil Hospitals, Superintending Engineers and district officers registered the names of all persons likely to prove useful on the various classes of relief work. In order to provide for the important work of superior supervision the Government of India were asked for the services of 25 Military Officers, 10 to arrive on the 1st December and 15 on the 1st January: it was at the same time intimated that 25 more might be required later on if the situation developed unfavourably. The services of 15 more officers were eventually asked for and received on the 1st February and in April an additional officer was deputed to the Garhwal district. Seven probationary police officers who had been under instruction for a year in the school at Moradabad were also reserved for similar duties. Ample stocks of tools and plant were collected everywhere to meet the first calls for relief, and the programmes both of departmental relief works and of those in charge of district officers were carefully examined and amplified.

The main object kept in view in the revision of relief programmes was that the works to be undertaken should be as far as possible of a useful description. The sanction of the Government of India was obtained to the inclusion of the

earthwork of the Unao-Rae Bareli-Allahabad, the Balamau-Sitapur, the Sitapur-Barhwal, and the Rosa-Sitapur railways in the famine programmes. In many districts, especially in Bundelkhand, previous famines had exhausted most of the really useful works on the district programmes and the works available on the programmes both of the Public Works department and of the civil department were found, in spite of the directions of the Famine Code, to be quite insufficient in most districts of the province to meet the requirements of a serious famine. The civil programmes must indeed always be incomplete, as the inevitable changes which occur from time to time make it a difficult task to keep up to date the lists of those willing to undertake and manage works. Moreover many persons are unwilling to assume the obligation of undertaking works until a famine is actually upon them. In a number of districts it was found that the works entered on the programmes were lacking in the very quality of utility which is of primary importance in a famine work, and they were, as much as possible, discarded in favour of new works for which schemes and estimates had at once to be prepared. Special efforts were therefore necessary to provide a sufficient number of suitable works to meet the needs of the present year. In Bundelkhand, however, the preparations of the Irrigation department made it possible to arrange that a considerable portion of the relief works should be composed of canal extensions, the erection of field embankments, drainage schemes and irrigation tanks, which would help permanently to secure future harvests. In the Banda district a special sub-division of the Ken canal division had for the previous two years been employed in working up projects for field embankments, of which no less than 2,780 were in readiness. In Jalaun 110, in Hamirpur 82, in Jhansi 55 and in the Bundelkhand portion of the Allahabad district 64 similar schemes were prepared. In the Banda district also the project for a tank at Gurehhappa and the surveys for canals from the Paisuni and Ohen rivers were completed. Schemes also were prepared for five tanks in South Allahabad. Outside Bundelkhand the Irrigation department was specially active in Mirzapur and Hardoi. In the former district surveys were completed for canals from the Ghori and Sukhra rivers, and schemes were prepared for 57 field embankments. In Hardoi a special survey party was deputed to prepare projects in connection with the improvement of the main drainage lines of the district: profiles were erected in order that famine labour could be employed on the work without delay when the demand arose, and in fact 3,800,000 cubic feet of earthwork was completed by famine labour. In the Agra district also in addition to 16 field embankments, surveys and estimates were made for 11 large tanks, and profiles were erected on the lines of the embankments. Profiles also were erected for the raising of the Agra-Tantpur district road, where it would be submerged in the tanks.

proposed at Sarendhi and Kathumri. This work was commenced by famine labour and is being completed departmentally. Schemes for a number of field embankments were made available also in the Muttra, Cawnpore and Fatehpur districts. In Muttra projects were prepared for two ravine embankments and for the clearance of the bed of a channel leading to the Jumna; in Fatehpur there was also a project for improving the drainage at the head of the Bari river. As regards canal extensions 19 miles of the main line of the Belan canal in the south of the Allahabad district were laid out, and the earthwork of three miles eventually completed by famine labour: on the Betwa canal in the Jalaun district famine charges were employed in the remodelling of the Hamirpur branch and the Jalaun distributary: also, to a smaller extent, on the construction of new minor channels and the clearance of existing distributaries. The Irrigation department, moreover, gave valuable assistance throughout the famine by the employment of labour on departmental works. Outside Bundelkhand there was little demand for work in the Canal divisions, and in some divisions difficulty was actually experienced in obtaining the labour required for carrying out the ordinary works of maintenance and repairs; but in Bundelkhand, where a number of important works were under construction, there was a strong and maintained demand for labour: in the Hamirpur district in particular the work afforded on the canals under construction did much to delay the necessity for relief works. The average number of workers employed by the Irrigation department daily throughout the famine period on the different departmental works in Bundelkhand was not less than 22,000, of whom 9,500 were on the Dhassan canal in Hamirpur; 5,700 on the Dhukwan reservoir in Jhansi, 3,000 on the Ken canal in Banda, 2,000 on the Betwa canal in Hamirpur, Jalaun and Jhansi, and 2,000 on the tanks in Jhansi and Hamirpur.

CHAPTER IV.

The history of the famine prior to the spring harvest.

27. The preparations thus made were well in advance of actual requirements. The price of foodgrains, which had been steadily rising during the monsoon period, had reached a phenomenal height by the 15th October when wheat was selling at 8 sers (16½lbs.) to the rupee on the average, as compared with the normal price of 14¾ sers (30lbs.) and with 8 sers 6 chhataks (17¼lbs.) on the 15th October 1896: the average price of the cheapest grain in ordinary use was approximately 11 sers 3 chhataks (23lbs.) to the rupee as compared with 12⅛ sers (25lbs.) in 1896 and the normal price of 20 sers 14 chhataks (43lbs.): moreover, common rice which sold at 8½ sers (17½lbs.) to the rupee on the 15th October 1896 was now selling at a little more than 6 sers (12½lbs.). The rise in prices continued steadily throughout the remainder of October and November. At the end of November the price of wheat was 7½ sers (15½lbs.) to the rupee and that of the cheapest grain 10½ sers (21¾lbs.). In spite of this few of the ordinary signs of famine were as yet apparent; the health of the people showed no marked indications of privation; the death-rate which had risen from 28·8 per 10,000 of the population in September to 32·8 in October and 34·8 in November was still not in excess of the normal, and no emaciated persons were anywhere to be seen. There was no noticeable wandering or collection of beggars in large towns, such as occurred at the corresponding period in 1896: and the permanent poorhouses were nowhere attracting an unusual number of new inmates. The statistics of crime showed a slight but inconsiderable rise. Moreover, the agricultural labourer was fully provided with employment in the field owing to the energy with which the cultivators, helped by the liberal advances already mentioned, prosecuted the sowing of the spring crops. Sowings continued vigorously throughout November and in many places until the end of December, about a month later than usual, in spite of the fact that these months were rainless and the province was not favoured, as in 1896, with an opportune fall of rain in the last week of November.

The commencement of relief measures was thus delayed. In a few of the districts most seriously affected by the crop failure it was considered necessary during November to open works in order to test the need for relief. The first test work was opened in the Meja tahsil of the Allahabad district on the 1st November, and during the month other test works were started in the districts of Banda, Mirzapur, Bahraich and Gonda. The first special poorhouse was opened at Bahraich on the 1st November, and in the course of the month a poorhouse

was opened also at Hardoi. At the end of the month however there were only 198 persons in the two poorhouses and 5,617 workers on the test works. The postponement of the need for relief measures is in strong contrast to the history of the famine of 1896-97, when relief measures were in full swing by the end of October, at which time 99,200 persons were on relief in 29 districts: while at the end of November 1896 there were 168,939 persons on relief in 31 districts, of which nine had been officially recognized as distressed and 22 had test works or other precautionary measures. In the Bundelkhand famine also of 1905-06 test works were started in the Jalaun district on the 13th September and were converted into relief works on the 1st November.

Thus in the present season the necessity for full famine relief measures did not arise until December. The need was first apparent in submontane Oudh, and famine was declared in Gonda and Bahraich on the 1st December. A few days later test works were converted into relief works, and the distribution of gratuitous relief commenced in those districts. On the 14th December famine was officially recognized in pargana Upraudh of the Mirzapur district, on the 15th December in the Bara and Meja tahsils of the Allahabad district and on the 22nd December in the Jalaun district. At the end of the month there were 42,398 persons on relief works with 11,575 dependants in these districts.

It became necessary however at this period to grant gratuitous relief in districts other than those actually requiring full famine measures. The United Provinces Famine Code provides that gratuitous relief shall ordinarily commence at the same time as relief works and the preparation of preliminary lists of persons eligible for gratuitous relief shall be made when the number on test works shows that distress is imminent; but, as has been stated, the Government realised as early as October that owing to the pressure of high prices upon the poorer classes, especially upon those in the towns who live on small fixed incomes, gratuitous relief would in many places be required before the necessity for relief works was established. Consequently as early as the 1st December the distribution of gratuitous relief was sanctioned in the cities of Lucknow, Benares and Agra and the city and towns of the Mirzapur district. By the end of December gratuitous relief was being given in nine districts or portions of districts in addition to the five districts in which famine had been recognized. In such cases a declaration of "scarcity" was made in order to satisfy account requirements and in the case of Lucknow city famine was declared in the belief that famine measures would before long be required in that district. As the event proved relief works were never needed in Lucknow: the notification of famine in the city was of a purely formal character and was withdrawn later. The amount of gratuitous relief which was given in

December was comparatively small, the number relieved in this way at the end of the month being only 25,434.

At this time special poorhouses were in existence in nine districts and contained 1,341 inmates, while test works were in operation in eight districts with 10,197 workers. The feature of the month was the continued demand for agricultural labour for irrigation and sowing of the spring crops, and the good wages obtainable by labourers. As has been shown, it was only in a few districts that work was becoming scarce and famine works were beginning to fill. In the Himalayan districts, although the price of food was exceptionally high, test works had so far not disclosed any great demand for work.

In the middle of December the Government impressed upon district officers the importance of making a full use of aided village works, in the hope that in many districts where distress was expected to occur but would, it was hoped, not be very severe, relief by means of public works could be avoided if aided works were fully developed. Divisional allotments aggregating 9¼ lakhs (£61,650) were made for this purpose, the recoverable portion of the loan being fixed at ¼ to ⅓ in Bundelkhand and the Mirzapur district and ½ elsewhere. These hopes, it will be seen, were fully realised: landlords proved willing to come forward and take these advances; the aided works so constructed formed one of the most important features of the famine operations and the original allotment of 9¼ lakhs was far exceeded.

28. The year closed without rain and in spite of the small numbers on relief the situation was gloomy as the unirrigated spring crops were in a precarious condition. Prices rose rapidly and in the second week of January wheat was selling on the average at less than 7 sers (14½lbs.) to the rupee and the cheapest grain in ordinary use was selling at 9 sers (18½lbs.): the price of common rice also remained at the rate of about 6 sers (12½lbs.) to the rupee. But on the 10th January the eagerly expected rain came at last: there was general rain on the 10th and 11th January averaging nearly an inch throughout the province, and there was again good rain in many districts towards the end of the month. This rain came too late to increase materially the area of the spring crops, although in some places extra sowings were made, but it saved the unirrigated crops and gave a welcome respite to the overworked cattle, which had been kept working at high pressure on the well-runs since the end of August, and also gave a start to the growth of some much-needed fodder. Speaking generally it may be said that the whole of the Rohilkhand and Kumaun divisions were saved from famine by this timely rainfall, while the spring crops were immensely benefited everywhere. The effect of the rain was also to cause a slight fall in prices in the second half of the month, though they still remained very high and the cheapest grain sold at less than 10 sers (20½lbs.) to the rupee in

most places. At this time imports from the Punjab and elsewhere were pouring in at the rate of about 50,000 tons a week.

Although the condition of the people remained wonderfully good and there were few signs of emaciation and little wandering, there was a steady expansion during the month of January of the area requiring relief. Famine was recognized in tahsil Karchana of the Allahabad district and in the districts of Sitapur, Banda, Jaunpur, Kheri, Muttra, and Etawah. Gratuitous relief also without relief works was in operation at the end of the month in 24 districts. The total number of persons on relief increased during January at the rate of 75,000 a week, and amounted on the 25th January to 503,685. Of these 336,126 were workers or dependants on works, 163,193 were gratuitously relieved, while the number in poorhouses was only 4,264.

The number continued to rise steadily throughout February, and seven districts (Bara Banki, Sultanpur, Fyzabad, Agra, Hardoi and portions of Basti and Jhansi) were added to the famine area, while gratuitous relief was started in four more districts. In the middle of March the declaration of famine became necessary in the Hamirpur district which had held out exceptionally long largely because of the amount of work available on the canals under construction. The 14th March marked the turn of the rising tide of distress: on that date the number on relief was 1,411,576, the maximum recorded in the famine. The area in which famine had been recognized at this time comprised Bundelkhand with the southern tahsils of the Allahabad district, the three districts of Muttra, Agra and Etawah in the Agra division, the Mirzapur and Jaunpur districts in the Benares division, and in the Gorakhpur division the two tahsils of the Basti district which border on submontane Oudh; in Oudh the whole of the Fyzabad division except the Partabgarh district, and in the Lucknow division, the districts of Sitapur, Kheri and Hardoi, with Lucknow city. The area in which gratuitous relief or gratuitous relief with aided works and in some cases test works was in operation comprised the rest of the province excepting only the Meerut division, excluding Dehra Dun on the west, the Gorakhpur district on the east, the Partabgarh district in Oudh and the districts of Naini Tal and Garhwal.

CHAPTER V.

The *rabi* or spring harvest of 1908. The *zaid* or miscellaneous crops.

29. The first period of the famine may be said to have come to an end with the harvesting of the spring crops, and it is desirable at this point to estimate the outturn of that harvest and its effect upon the course of the famine. It has been mentioned already that the drought of September and October had greatly reduced the area which could be sown with spring crops, but that every encouragement had been given to the cultivators by liberal suspensions and remissions of land revenue and by large advances to extend the area of sowings as far as possible. The people set to work with the utmost vigour, and eventually the area sown was considerably in excess of the early estimates, amounting to 68 per cent. of the normal for the province as a whole. It approached or exceeded three-quarters of the normal in the divisions of Meerut, Agra, Benares and Gorakhpur; in the first two, the comparative success was due largely to the canals, in the last two to the prolongation of the rains. The Mirzapur district fared worse than the rest of the Benares division and sowed little more than half the usual area, while the Muzaffarnagar and Muttra districts were least successful in the western divisions. Rohilkhand sowed just over 70 per cent. of the normal, Oudh 62 per cent. and the Allahabad division 50 per cent.: the worst districts in Oudh were those in the north, Hardoi, Sitapur, Bahraich, Gonda and Kheri; while in Allahabad, Banda, Hamirpur and Jalaun show the smallest areas, the last named having sown less than a quarter of the normal. It is difficult to compare completely the area sown in 1896-97, as the actual figures were not recorded for eleven districts where survey or settlement operations were in progress. Omitting these districts from both years, the comparison stands as detailed in the margin. It will be seen that all divisions except Gorakhpur secured a larger area in the earlier drought. The explanation of this fact is to be found in the widespread rainfall of November 1896, which, coming at a most unusual time, enabled the area of sowings to be greatly extended. No such good fortune befell the province in 1907, when not a drop

	1896-97. Acres.	1907-08. Acres.
Meerut division (excluding Meerut) ...	1,914,215	1,688,670
Agra division	1,826,322	1,614,756
Rohilkhand division (Moradabad and Pilibhit only)	554,221	643,623
Allahabad division (excluding Jhansi) ...	1,375,982	1,254,961
Benares division	1,297,828	1,199,320
Gorakhpur division	1,711,747	1,855,805
Lucknow division (excluding Hardoi and Kheri)	1,111,865	968,821
Fyzabad division (Fyzabad, Gonda and Partabgarh)	1,070,446	947,029

of rain was recorded throughout the whole of November and December; and every acre that was sown depended either on artificial irrigation or on the moisture that remaine over from August and September. In the circumstances the area sown must be regarded as surprisingly large when judged by the experience of the earlier season.

The choice of crops made by the people presents striking differences from the cropping of an ordinary year. Wheat indeed was sown on about the usual proportion of the land, its area being 64 per cent. of the normal while the total area was 68 per cent.; but gram occupied only 42 per cent. of the normal, being displaced by barley which was sown on an area actually 10 per cent. larger than that of an ordinary year. The poor yield of the late-sown gram was a feature of the harvest of 1897, and this recent experience probably accounts to a great extent for the displacement of the crop; agriculturally there is no doubt that a seed-bed of the kind which alone was possible in 1907 is more suited to barley than to gram.

30. The winter rains of 1908 did not in their total amount differ appreciably from the normal. There was good general rain in the second week of January, further useful falls in the western districts at the end of that month, and almost general rain early in February, while March and April were for the most part dry. The season was not therefore unfavourable except in the absence of rain during the latter half of December—an important exception in the special circumstances of the year. Calamities such as frost, hail, rust, or insect pests were not widely prevalent; and if the spring crops depended solely on the weather of the months during which they occupy the ground an almost uniformly successful harvest might have been expected. But even on irrigated lands these crops depend very largely on the surplus of moisture stored in the sub-soil during the months of heavy rain, and apparently light surface irrigation will not secure a satisfactory yield if the sub-soil has been depleted of its stores. It is well known that frequent light falls of rain do not add materially to the sub-soil reserve: continuous heavy rain is necessary for this purpose, and it is a noteworthy fact that in 1907, several districts never got really wet throughout the rains. Thus Kheri received four inches of rain in the last week of July, but in the other weeks of the short rainy season the falls were two inches or less: Gonda received three inches in the first week of August with a dry week following, and the other weekly falls ranged from one to two inches, while Bahraich never had more than 2½ inches in any week. These districts may be contrasted with Pilibhit, which had 15 inches in a fortnight, or Jaunpur and Partabgarh which twice had 10 inches in a fortnight with only short intervals between. A full discussion of the relation of the autumn rains to the yield of the spring crops would be out of place; enough has been

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said to indicate that the relation exists and that it may be of considerable importance in a year of drought.

31. When the crops came to be cut the wisdom of the selection made by cultivators was apparent: barley gave the best yield of all; wheat was a little inferior to barley all round; peas, *masur* and *arhar* were as a rule moderate, and gram was poor or bad in most districts. Opium was a very disappointing crop, and the spring oilseeds were very uneven, being poor in some of the tracts where their importance is greatest, and for the province as a whole their yield was only about 50 per cent. of the normal.

Considering first the yield *on the area sown*, the Meerut division (except Aligarh) and the Muttra district showed very disappointing results, the outturn of all crops taken together ranging from 62 to 72 per cent. of the normal. Complaints were numerous of the inadequacy of the supply of water in the canals, but behind these complaints lay the initial lack of water in the sub-soil; the growing season is prolonged in these districts and the falling off in the crops as the hot weather drew on was very marked. The rest of the Agra division (with Aligarh) was more successful, the yield exceeding 80 per cent. in all districts and reaching 94 in Agra itself. Rohilkhand and the plains portion of Kumaun secured from 70 to 80 per cent., the Gorakhpur division from 80 to 90, and most of the Benares division the same figure; the yield in the Jaunpur district was well above the normal while that of Mirzapur was below 70 per cent. The figures for the Allahabad division are as usual more widely divergent. The tract situated between the Ganges and the Jumna secured about 75 per cent., Banda and Hamirpur 65, Jhansi a normal yield, but Jalaun only half the normal. In Oudh too there are wide divergencies; the Lucknow division obtained 80 per cent. or more of the normal, except the Kheri district which got 25 per cent.; while in the Fyzabad division three districts secured 75 per cent., Bara Banki 50, Gonda 37 and Bahraich 31.

On the area sown then the plains did fairly well on the whole with the exception of the upper portion of the tract situated between the Ganges and the Jumna, north Oudh and Bundelkhand. In the hills the yield was as usual very different in different areas, but speaking generally the hill crops were poor, probably less than 50 per cent. of the normal.

32. The following table shows the proportionate yield of the spring harvest when account is taken of the decreased area sown. The cautions attached to the corresponding table of the autumn harvest are equally applicable in this case.

Statement showing percentage outturn of the spring harvest in terms of normal yield on normal area.

District.	1897.	1908.	District.	1897.	1908.
Dehra Dun ...	91	69	Benares ...	56	95
Saharanpur ...	53	65	Mirzapur ...	49	41
Muzaffarnagar ...	55	51	Jaunpur ...	46	108
Meerut ...	84	55	Ghazipur ...	71	70
Bulandshahr ...	88	64	Ballia	71	80
Aligarh ...	72	82	Gorakhpur ...	57	83
Muttra... ...	57	59	Basti	67	86
Agra	42	83	Azamgarh ...	48	101
Farrukhabad ...	52	71	Naini Tal (plains only).	64	92
Mainpuri ...	70	88			
Etawah ...	70	62	Lucknow ...	54	73
Etah	62	80	Unao ...	42	77
Bareilly ...	66	53	Rae Bareli ...	41	73
Bijnor.... ...	58	57	Sitapur ...	63	61
Budaun ...	70	65	Hardoi ...	24	66
Moradabad ...	53	59	Kheri ...	80	18
Shahjahanpur ...	43	75	Fyzabad ...	54	72
Pilibhit ...	64	58	Gonda	57	29
Cawnpore ...	42	48	Bahraich ...	75	25
Fatehpur ...	50	55	Sultanpur ...	66	69
Banda	16	23	Partabgarh ...	40	80
Hamirpur ...	25	26	Bara Banki ...	59	42
Allahabad ...	25	61			
Jhansi	31	74	Total U. P. of Agra and Oudh.	60	60
Jalaun... ...	10	17			

It will be seen that for the province as a whole the proportion of the normal season's income that was secured in 1908 was exactly the same (60 per cent.) as the proportion realised in the previous drought, the loss in area being compensated by the better yield. The best results were obtained in the Gorakhpur and Benares divisions (excluding the Mirzapur district from the last named), in the plains portion of Kumaun, and the districts of Aligarh, Agra, Mainpuri, Etah and Partabgarh. The worst figures are naturally those for Bundelkhand, Mirzapur and North Oudh where the area was small, much land having been ploughed which was never sown, and the yield relatively poor. Jalaun stands at the bottom of the list with 17 per cent. in the spring (after 11 per cent. in the autumn), and Banda and Hamirpur had about one-fourth of the normal income. Bad as these figures are, they are somewhat better than in 1897, while Jhansi and the composite district of Allahabad are very much better. Mirzapur according to the figures obtained less than in the earlier drought; but it must be remembered that areas are not recorded for a considerable portion of this district, and the figures for it have relatively little value.

North Oudh which did comparatively well in 1897, shows very poor results now, Kheri being the worst of all with 18 per cent. against 80, while Gonda and Bahraich with the transitional district of Bara Banki all show a greater loss than in the earlier drought. On the other hand South Oudh proper shows a very substantial gain in the later year, while of the other

transitional districts, Sitapur is about the same, and Hardoi shows a great improvement.

Outside Bundelkhand and Oudh the greatest advances are shown in the districts of Agra, Shahjahanpur, Benares, Jaunpur and Azamgarh, while comparatively the worst results are found in the Meerut division, that is in the districts of Dehra Dun, Meerut and Bulandshahr.

33. A calculation based on these figures of the actual weight of foodgrains produced in the season indicates a loss in 1908 of over three million tons, approximately the same as in the earlier drought, which may be added to the four million tons lost in the autumn. The total of seven million tons represents the food-supply of the people for almost nine months.

The value of the food crops of the province in either harvest may be taken at Rs. 60 (£4) per ton [that is at 18⅔ sers (38½lbs.) per rupee] in normal seasons. At this rate the loss of 4 million tons in the autumn may be put at 24 crores of rupees and that of 3 million tons in the spring at 18 crores, or a total for the two harvests of 42 crores of rupees (equivalent to £28,000,000 sterling). A calculation made on the same basis in 1896-97 estimated the loss in that year as not less than 34½ crores, or £23,000,000 sterling. This estimate does not take into account the fact that unusually high prices were realised for the crops that were harvested in both seasons, but it should be remembered that the produce secured (and also the surplus stock) was not sold so much as eaten. So far as this was the case the cultivator was not directly benefited by the high prices obtainable for foodgrains in the market; and, though something should be deducted on this account from the figures of estimated loss given above, it would be entirely misleading to make the calculation in terms of the prevailing market prices.

The obvious money losses in the spring are less than in the autumn as wheat, which is largely grown for sale, is necessarily included in the foregoing calculation of the food-supply. It is difficult to estimate the loss caused by the failure of the oil-seeds (rapeseed and linseed), which are sown by almost every cultivator on a small scale and yield an enormous aggregate of produce; but for the two crops together it was certainly over two, and probably very nearly three crores of rupees (£2,000,000) while the Opium Agent at Benares states that payments to cultivators of the poppy fell below the expected figures by about 30 lakhs (£200,000).

34. To complete the summary of the agricultural income of the year it is necessary to mention certain crops or produce which can be classed neither with the spring nor with the autumn harvest. The first of these is the small millet (*Panicum miliaceum*) known as *chena* or *sawan*, which in some parts of the country is sown in the spring and harvested in the summer. It is not a popular crop, yielding as it does an unpalatable food at the cost of much exertion and involving great

strain on the cattle ; and it is sown usually by small cultivators who foresee that they will be short of food before the autumn crops are ripe. In 1908, this crop was sown more widely than usual, but on a somewhat smaller scale than in 1897 ; it was more generally sown in North Oudh, and in the upper portion of the tract situated between the Ganges and the Jumna, but there was a very marked fall in the area in the lower portion of that tract and a decline also in most of South Oudh. The crop was as usual almost uniformly successful and must have been of substantial benefit to the localities where it was grown on a large scale.

During the same season various miscellaneous crops are grown ; summer-rice is locally important in a few districts, but the bulk of these crops consist of an extraordinary variety of melons, gourds and cucumbers. These crops too were sown more widely than usual, and about on the same scale as in 1897 ; they were for the most part very successful and brought a welcome addition of palatable food.

More important than these is the yield of the mango, a tree which is common all over the province north of the Jumna, but which dominates the landscape in most of the eastern districts and in Oudh. It is a capricious tree, and not very much is known as to the causes that produce an abundant yield ; but whatever the cause, in the spring of 1908 it flowered in extraordinary profusion, and though the crop was injured in places by hot weather storms the yield was in the end sufficiently abundant to justify the description of 1908, as one of the great mango years. The fruit was brought into the markets in large quantities throughout the season, and its benefits were thus shared between town and country.

The *mahua* tree *(Bassia latifolia)* is another source of subsidiary food supply, commonest in Bundelkhand, Oudh and the eastern districts, but rarely or never seen in the west, where the climate does not admit of its growth. The waxy flowers which fall in the spring are in this case the source of food, and they are eagerly gathered as they fall. At one time there appeared to be prospects of a fair yield of these flowers, but as the season went on the flowers failed to develop, and eventually no district reported a satisfactory yield, the failure being most marked in Bundelkhand. The trees are, however, abundant in many localities, and though they did not give what was expected, what they gave was eagerly welcomed by the people. On the whole it may be said that the subsidiary supplies of food that became available during the hot weather were at least as great as could have been hoped for, except in Bundelkhand where the yield from the comparatively few mango trees could not make up for the failure of the *mahua*.

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CHAPTER VI.

The effect of the spring harvest and the course of the famine in the hot weather.

35. By the 14th March the number of persons in receipt of relief had reached the total of 1,411,576, of whom 1,040,476 were on works; 1,756 were weavers and 369,344 were gratuitously relieved in various ways. After this date the number decreased week by week until the 18th April, when it amounted to 1,095,240, of whom 765,101 were on works; 2,038 were weavers and 328,106 on gratuitous relief. The spring harvest acted in two different ways in reducing the number of persons requiring relief. In the first place additional work became available in the fields while the crop was being gathered. In the second place there was a decided fall in prices during March and April. By the end of that month wheat was selling at 8½ sers (17½lbs.) to the rupee and barley at 12¼ sers (25¼lbs.), though the price of other grains in common use had not generally fallen much below 10 sers (20½lbs.). The result of this was that the period of serious tension practically came to an end after the spring harvest in those areas where the scarcity had been caused primarily by high prices and not by want of employment. This area comprised the whole of Rohilkhand, the Agra division except Muttra and certain parts of Agra and Etawah, the Benares division except Mirzapur and Jaunpur, the Allahabad division, excluding Bundelkhand and part of Fatehpur, the district of Azamgarh and in Oudh, Lucknow, Rae Bareli, Unao and the famine districts of Fyzabad and Sultanpur, in which the declaration of famine was altered to one of scarcity on the 1st May. Relief did not at once cease in this area; it was closed in the Farrukhabad district on the 18th April, in the Mainpuri district and the greater part of the Etah district from the 1st May and in the remainder of the Etah district from the 1st June; but elsewhere a moderate amount of gratuitous relief with, in some cases, a number of aided works continued throughout the hot weather. In the majority of the famine districts there was only a temporary reduction in the number of persons relieved during the few weeks when the crops were being harvested. The harvest began earlier in some districts than in others and the amount of additional work provided also varied from district to district. By the middle of March the number of workers began to decrease in most districts, but in Mirzapur the fall began in the first week of March, whereas in Bahraich no reduction took place until the 28th March. In Kheri, Bahraich and Hardoi the fall in the number of workers lasted only for three weeks, in Bara Banki, Gonda and Banda

for four weeks, in Jalaun and Sitapur for five weeks, in Mirzapur and Jaunpur for six weeks, and in Muttra for eight weeks. In some cases, as for instance in Mirzapur, the picking of *mahua* succeeded the actual harvesting of the spring crops and resulted in a continued reduction of the number after the crops had been cut. The proportion of workers who left the works during this period varied from 14 per cent. in Kheri, 20 per cent. in Bahraich and 23·7 per cent. in Banda to as much as 42·6 per cent. in Jaunpur, 44·6 per cent. in Muttra, 51·8 per cent. in Gonda and 65 per cent. in Bara Banki. In the Bundelkhand tahsils of the Allahabad district the decline in the number of workers continued from the 7th March to the 16th May and amounted to 62 per cent. Hamirpur and Basti require special consideration. In Hamirpur, as has been explained above, circumstances deferred the introduction of relief works until the middle of March. The spring crops (except in the riverine mahals and in the lake-irrigated area of the Mahoba sub-division, which may be left out of consideration) were practically all cut by then. Gram had been sown by itself almost everywhere instead of the usual mixed crop and on a very small area. The cutting of the gram therefore was not delayed by the wheat or barley, and owing to the hot west winds cultivators cut it earlier than they would otherwise have done. Famine then in this district did not commence until the spring crops had been harvested. There were less than 10,000 persons on relief on the 14th March, but by the end of April the number exceeded 30,000. In Basti the only portion of the district affected was part of the Domariaganj and Haraiya tahsils, bordering on Gonda. This is a purely rice area and the spring harvest had in consequence no effect on the number relieved which increased by more than 20,000 during March and April. In the Jumna side tract of Fatehpur which resembles Bundelkhand it was considered desirable to start a few civil works in the middle of March and scarcity was accordingly declared in this area on the 15th March, but operations were on a very small scale.

The Himalayan districts of Garhwal and Almora and the hill portions of Dehra Dun which hitherto, in spite of the exceptional dearness of food in those parts, had remained practically outside the area affected by scarcity, were threatened about this time with a serious shortage of stocks. Scarcity was declared in Garhwal on the 1st April, and measures, which will be described in due course, were undertaken by Government in order to replenish the stock of food. These measures with a few small civil and aided works and a small amount of gratuitous relief sufficed to meet the situation.

36. On the approach of the hot weather arrangements were made for breaking up the large public works charges and employing the workers on smaller charges and civil works. This procedure was dictated by various

considerations. On large works the hottest season of the year brings difficulties in connection with the water supply, increases the risk of the outbreak of epidemic disease, and adds to the discomfort of dependants, who are almost all young children. Moreover, if the workers are transferred to labour in the vicinity of their homes they will move more readily to the ordinary forms of employment which become available on the advent of the monsoon. This procedure is one which is emphasized in the Famine Code, but in the present year it was inaugurated earlier than usual. District officers were addressed on the subject in the first week of April and were instructed to arrange for the breaking up of the large works as early in May as possible. The best method of relieving the large number of dependants was made the subject of a reference to the Government of India and it was decided that it was preferable to enter the dependants where necessary upon the gratuitous relief lists in their villages. Accordingly, whenever a public work was broken up and replaced by civil works, lists of dependants, arranged by villages, were prepared under supervision of the officer in charge of the work and sent to the circle officer in whose circle the villages were situated to enable him to enquire into the circumstances of all such dependants and the necessity for giving them gratuitous relief. To obviate all risks, all dependants, or their guardians, were given an advance of not less than a week or not more than a fortnight's allowance of their class, to enable them to subsist until their circumstances had been enquired into, and their names, when necessary, registered for gratuitous relief by the circle officer. Special instructions were given that when children who had been dependants on works were transferred to gratuitous relief their mothers also should be freely admitted to such relief (though they might previously have been working on the public works) owing to their inability to leave their children in the village uncared for while they were away at work. In four selected districts (Muttra, Bara Banki, Hardoi and Jaunpur), which were not among the districts most seriously affected, a system was introduced experimentally of paying workers upon civil works wages somewhat higher than those allowed by the Famine Code and approximating to the wages obtainable in the ordinary labour market, but at the same time refusing gratuitous relief (save in exceptional circumstances) to their dependants. In many districts it had been observed that the labourer himself had kept away from relief works and obtained better wages elsewhere, while sending the women and children of his family to the works where they had been able to earn a somewhat unnecessarily large wage. It was considered that with the relaxation of distress after the spring harvest if the labourer were offered employment at the normal wage, he should in most cases be able to support his dependants, without any necessity

for giving them gratuitous relief. The wage fixed for the civil works in the selected districts was 2½ annas for a man, 1½ annas for a woman and 1 anna for a working child. The reports of the working of this system show that it was successful, wherever it was in operation long enough to obtain a fair trial, and that the wage offered was sufficient to support the labourer and his family without being sufficiently attractive to tempt him from ordinary employment in the open market. It had the additional advantage that the labourer was saved from the annoyance caused by a change in wages owing to the fluctuation of prices and alteration of the price basis.

The development of aided village works was another prominent feature of the famine operations in the hot weather. These works proved exceedingly popular and the number of persons relieved on them rose from 45,098 on the 4th April to no less than 177,185 on the 6th June. They were of special utility in the summer months as they provided work for a number of persons near their homes on the breaking up of the large public works and were thus supplementary to the civil works, while the management which was entirely non-official was allowed to work with as much freedom from restriction as was compatible with a general supervision. These works were largely employed in the non-famine districts, and performed a useful service in providing additional employment at a time when agricultural work was slack.

The inauguration of this system of small works was instrumental in keeping under control the outbreaks of cholera and small-pox with which a number of districts were threatened in the hot weather. Epidemics of this kind are almost impossible to control on large public works, but in the present year, although cholera was in some districts raging in epidemic form in the villages surrounding the works, it never obtained any real hold on the works themselves.

Throughout the hot weather prices remained almost stationary with a slight upward tendency. The numbers on relief did not, however, rise to the level which they had reached in March. There was no rush for employment in May, such as might have been anticipated from previous experience. The reasons for this were the conversion of public to civil works, the transfer of dependants to gratuitous relief lists, the good hot weather crops, and the useful fall of rain on the 10th and 11th May. Many labourers finding their families provided for, were enabled to occupy themselves in preparing their fields for sowing the autumn crops, in re-thatching their houses before the rains and in arranging for the purchase of fresh cattle and seed. The greatest number of persons relieved in the hot weather was 1,187,148 on the 2nd May, 889,710 being on works, 1,721 being weavers and 295,817 gratuitously relieved. From this date the number on works continued to decrease, while the number gratuitously relieved was swollen by the addition

of a large number of former dependants. Thus on the 13th June out of a total of 1,011,587 persons 626,038 were on works, 1,315 were weavers and 384,234 were gratuitously relieved.

In the latter part of the hot weather scarcity of fodder began seriously to be felt in Bundelkhand and the Jumna side portion of Fatehpur and the condition of the cattle in these parts began to deteriorate.

CHAPTER VII.

The monsoon of 1908, and the closure of relief.

37. The monsoon burst over the Himalayan and submontane districts between the 15th and 20th June; and over the rest of the province, though the rains had not definitely set in, there were almost everywhere showers at the end of the month sufficient to freshen up the sugarcane and enable a good deal of ploughing to be done. All fodder difficulties also soon disappeared and the condition of the cattle began rapidly to improve. By the middle of July there had been good rain everywhere and agricultural operations were well forward by the end of that month, though the rainfall was less favourable in the north-eastern districts than over the rest of the country. More rain was at this time required for the rice crop in practically the whole of the Benares and Gorakhpur divisions and most of the Fyzabad division.

The rainfall of the month of August was most unevenly distributed. In the west and south-west of the province it was in considerable excess of the normal, and caused numerous floods in the districts of the Meerut and Agra divisions, particularly in the Muttra district, while in Bundelkhand agricultural operations were generally at a standstill in the black-soil areas, which were water-logged by the heavy rain. In all this part of the country a break in the rains was urgently required at the end of August. In the east of the province, however, and in north Oudh the rainfall of the month was in serious defect, owing to the weakness of the monsoon from the Bay of Bengal; and whereas the rainfall in the west of the province exceeded the normal by 22 per cent. the rainfall in the east was 7 per cent. in defect on the average. The Gorakhpur district received only 59 per cent. of its normal amount, while in Bahraich the rainfall was only 20 per cent. of the normal and in the greater part of that district prospects of the autumn crop were gloomy at the end of August. The rainfall of the first week of September relieved immediate anxiety, the worst affected portion of the Bahraich district receiving 7 inches of rain; and in the second week a general break in the rains set in, which was beneficial to the western part of the province. At this time there was every prospect of at least a normal crop all round, though the defect of rain in the districts which depend mainly upon rice made the prospects of those districts less favourable than elsewhere. The break in the rains continued until almost the end of September and there was every appearance of the monsoon having passed away from Upper India. By the last week of September the situation in the eastern districts and in Oudh was decidedly unfavourable and

in portions of the Bahraich district was extremely serious. Fortunately however a cyclonic storm from the Bay of Bengal gave general though unevenly distributed rain on the 28th and 29th September over the eastern half of the province where it was most needed, and secured the certainty of a good harvest except in those localities where the late rice and in some places other crops also had already suffered from the absence of rain. While the area sown is well up to the normal taken as a whole, the proportion of late rice which has been sown in the present season is less than the normal; and in a number of districts rice has been sown broadcast to save the expense of transplantation. A large area was sown with *sawan* and maize, and these crops ripened and began to come into the markets at the end of August. Prices fell to some extent, and the need for further measures of relief practically ceased.

Ever since the establishment of the rains relief works had been gradually closed down or had closed naturally of themselves, the system of small village works enabling the cultivators and labourers to return readily to their ordinary occupations; and by the last week of August there remained only a few thousand workers who were still finding employment on the works in the Kheri and Bahraich districts. These works also were closed on the 29th August, the remaining workers receiving a month's dependant's dole. Gratuitous relief in the meantime had been reduced considerably in the less distressed areas, but in the famine districts an increase in the number receiving relief of this kind was inevitable during July, and on the 1st August the number in receipt of gratuitous relief reached 550,000, the maximum recorded in the famine. After that date it became possible almost everywhere to reduce the lists as the people returned to their agricultural work and village life resumed its normal course. In the majority of districts relief was closed by the middle of August and in practically all cases before the end of that month, those who remained on the lists receiving a month's final dole, so that the relief extended until the middle or near the end of September. The only exception was made in the case of a small area in the Garhwal district where the failure of the rain in April, May and June had not allowed of the *mandua* crop (*Eleurine coracana*), the staple of the tract, being sown till late so that the harvesting of that crop would not commence until October. In this case final doles to about 250 persons were given to last until the 11th October. Practically, however, it may be said that after the end of August there was no relief being given except by way of final doles and on the 10th September the Lieutenant-Governor was able to send the following telegram to the Government of India :—"I have much gratification in informing the Government of India that all famine relief operations have

been practically closed in the United Provinces. Valedictory doles were given to the few workers remaining on the 29th August and all works closed. Similar doles have also been given to the largely reduced number in poorhouses and in receipt of gratuitous village relief. All such doles will have been exhausted by the 26th September and the only work remaining will be the disposal of a few unclaimed orphans." The Government of India replied on the 11th September :— "The Governor General in Council has heard with much satisfaction that the position in the United Provinces has now so much improved that you are able to bring famine relief operations to a close, and trusts that favourable seasons will now ensure to the people who have suffered so much a rapid recovery from the calamity of the past year. His Excellency has from the outset followed with much interest and sympathy the progress of the relief operations and desires to congratulate yourself, your officers and your coadjutors amongst the public on the foresight displayed at each stage, on the promptitude and efficiency of the action taken and on the success which attended it."

The condition of the people was carefully watched everywhere as relief was being closed down, and there is no reason to believe that in a single case was relief withdrawn from those who required it. The rapidity with which the country resumed its normal condition was extraordinary and is in itself a splendid justification of the liberality with which gratuitous relief was given earlier in the year. By starting this form of relief with promptitude whenever the need for it was established there is no doubt that Government was able to prevent distress arising and to avoid the necessity of supporting a large number of people enfeebled by their earlier privations until late in October. By the system of giving final doles for the period of a month instead of a fortnight, as recommended by the Famine Code, considerable economy was effected in the reduction of an expensive staff a fortnight earlier than would otherwise have been the case, and the same remark applies with increased force to the closing of the works at the end of August with a final dole to the workers.

CHAPTER VIII.

Summary of the relief operations in different divisions and districts.

38. It is convenient to summarise here the relief operations undertaken in the different divisions and districts. The records of the famine of 1896-97 were defective in so far as no separate account existed of the relief operations in each district, and this omission has caused considerable inconvenience. On the present occasion all district officers have prepared a complete report of the operations in their districts, of which the principal features are included in this summary.

Rohilkhand.

The six districts of Rohilkhand in the present year as in the famine of 1896-97 lay outside the area of serious distress. In spite of the extensive failure of the autumn harvest and the pressure of high prices, measures of direct relief were required only on a small scale. In October 1907 it was anticipated that the division would suffer more severely; but the liberal advances which were made throughout Rohilkhand were of the utmost importance in keeping up the demand for labour: and the spring harvest gave a very good outturn. In Budaun the opium crop is of special importance, and though in the present year it was inferior to the crop obtained in normal years, it was valued at not less than 14¼ lakhs of rupees (£95,000). The advances also made by the Opium department for the construction and repair of masonry wells exceeded Rs. 66,000 (£4,400) in the Budaun and Moradabad districts. In Pilibhit the labouring classes were greatly assisted by the cutting of hay in the Government forests, which the Collector reports to have been the equivalent of a large relief work, only at better wages: many persons also found occupation in the cutting and carrying of *baib* grass (*Ischæmum augustifolium*) and firewood from the forests. There was thus at no time a serious scarcity of employment for those able to work. A test work was opened on the 29th February in the Gunnaur tahsil of the Budaun district and remained open until June: the number of workers averaged 500 in March, decreased to a little over 100 during the spring harvest, and scarcely exceeded 300 at any time during the hot weather. Informal test works which were opened in Bijnor and Shahjahanpur attracted no workers. There was therefore no need for relief works; at the same time a number of aided village works were constructed in Bareilly, Budaun, Bijnor and Shahjahanpur, and performed a useful service in affording additional employment when field labour was scarcest. In Budaun six small civil works were started in June as a supplement to the aided works. All these works closed early in July as soon as the monsoon was well

established, the greatest number of persons relieved on works at any one time in the division being 6,769 in the first week of June.

A significant indication that distress was never severe is the fact that there was practically no need for poorhouses. Two poorhouses were indeed opened in Shahjahanpur and one in Budaun, but the former never contained more than 64 inmates, and the latter harboured only three or four casual wanderers. Two other poorhouses in Shahjahanpur and one in Pilibhit were built but never occupied: and materials were collected for three poorhouses in Bijnor, but as soon as the winter rains fell in January it was seen that they would not be required. The relief also given by officers in charge of police stations to casual wanderers was absolutely insignificant, Rs. 11 only being expended on this object. The pressure of high prices was, however, severely felt by the poorer classes especially in the towns, which in Rohilkhand contain an exceptionally large number of *parda-nashin* Muhammadans, and early in January it was found necessary to organize gratuitous relief for such persons in all the urban areas. This relief was gradually extended to rural tracts where necessary, the areas most affected by crop failure being the Mirganj tahsil of Bareilly, the Gunnaur and Sahaswan tahsils of Budaun and about one-third of the Shahjahanpur district. Gratuitous relief was quite insignificant in amount in Pilibhit district and was confined in the Moradabad district to the three towns of Moradabad, Sambhal and Amroha, and the colony of semi-reclaimed hereditary criminals, called Haburahs. The greatest number gratuitously relieved at any one time in the division was 18,913 in the last week of March. The spring harvest in most parts of Rohilkhand put an end to the period of tension, and gratuitous relief was gradually reduced in the hot weather and ceased on the break of the rains. In most districts it terminated on the 15th or 30th June, but in Budaun it did not cease entirely until the 25th July. In addition relief to weavers was given to some extent in Bijnor. The scarcity of fodder, which was never acute, was met by the importation of hay from the Government forests of Pilibhit to the amount of 425 tons in Budaun and to a small extent in Shahjahanpur, Bareilly and Bijnor. A gratifying feature of the situation in this division was the extent to which the relief measures of Government were supplemented by private charity.

Muttra, Agra and Etawah.

39. In the Agra division the three districts of Muttra, Agra and Etawah require to be considered separately from the rest of the division. These districts, especially Etawah and Muttra, include a very considerable number of canal-protected villages interspersed with the dry tracts. They are in consequence less liable to serious famine than many other portions of the province, and famine, when it occurs, affects different areas in very different

degrees. If the severity of a famine be judged by the number on relief, the famine of 1896-97 would appear to have affected these districts to much the same extent as that of the present year, the greatest number of persons relieved in the earlier famine being 81,217 at the end of February, and in the later famine 75,572 on the 14th March. These districts also were on the fringe of the famine of 1905-06, and on that occasion famine was declared in Muttra and Etawah and in three tahsils of Agra. Though the number of persons relieved in that year was much less, hardly exceeding 20,000 at any one time, the scarcity of fodder was felt far more severely and caused great mortality among cattle. In the present year considerable advances were made for fodder in Muttra and Agra, but the scarcity of fodder was never acute, some tracts having more than they required and others less.

The areas in which the consequences of the drought were most severely felt on the present occasion were in Etawah the Jumna-Chambal tract, the neighbourhood of the Sengar river and the east of Bidhuna tahsil; in Muttra the Khadir on both sides of the Jumna, the northern half of Mat tahsil, a number of villages on the Bhartpur border and the Karwan river tract in Sadabad tahsil; and in Agra the Kiraoli and Kheragarh tahsils; especially the Jagner tract in the latter. The Bah tahsil of Agra secured an excellent spring harvest owing to a very large area having been sown with gram which the rain of January helped immensely, and was less seriously affected than in 1905-06. The first test work was opened in Muttra early in November, but did not at that time disclose any demand for employment: and relief works were not required in Muttra and Etawah until the latter half of January and in Agra until the middle of February. Prior to this, however, gratuitous relief had commenced in Muttra and Etawah in the middle of December and in Agra on the 1st January. The greatest number on the works was recorded in all three districts on the 14th March, when there were 12,284 workers with 6,539 dependants in Muttra, 2,933 workers with 1,527 dependants in Agra and 9,271 workers with 4,132 dependants in Etawah. The two latter districts had also 2,090 and 326 workers respectively on aided works, and in Agra the extra works undertaken by the Irrigation department were at this time affording employment to more than 2,000 labourers.

The effect of the spring harvest was practically to put an end to the need for relief works in Agra and Etawah, and materially to reduce the number gratuitously relieved which at this time exceeded 16,000 in either district. "Scarcity" instead of "famine" was declared on the 1st May in that portion of Etawah which lies north of the railway: and even in the south of the district it was found possible to close the last of the relief works by the end of May. In Agra also all relief works

were closed early in May. Several aided works, supplemented in Etawah by a few small civil works, were maintained during the hot weather. Similarly gratuitous relief after the spring crops had been harvested was practically confined to those villages which had received relief in revenue in the spring and to towns. It closed in Agra on the 11th July, except in the Jagner tract where it was continued for a month later, and in Etawah on the 15th August. Valedictory doles for the period of a month were given in all cases.

In Muttra the spring harvest had less effect. The two principal relief works remained open until the break of the rains and were attended during the hot weather by about 7,000 workers with 3,000 or 4,000 dependants. The remaining works were converted into civil works towards the end of May, but the number of workers was small. This was one of the districts in which the experiment was tried of paying a fixed wage higher than the Code scale on civil works, without placing the dependants on gratuitous relief. The system, however, was in operation for little more than a fortnight owing to the arrival of the monsoon. Gratuitous relief was given on a relatively smaller scale than in Agra and Etawah, the greatest number relieved in this way being 8,797 on the 11th July. It was closed with a final dole in the middle of August.

There was little need for poorhouse relief in any of these three districts largely owing to the fact that there were few wanderers from the surrounding native states. Three poorhouses, however, were constructed as a precautionary measure in Muttra, three in Agra and two in Etawah. The majority of these were closed in March or April, and in all cases on the break of the rains, having at no time contained more than a few hundred inmates in all. Relief to weavers was given on a small scale in Agra city.

Farrukhabad, Mainpuri and Etah.

The three remaining districts of the Agra division were very slightly affected in 1896-97 and entirely escaped the necessity of relief measures in 1905-06. In the present year also distress was never serious, and the very moderate amount of relief which was required was due solely to the pressure of high prices upon the poorer classes, and ended with the harvesting of the spring crops. Gratuitous relief on a small scale was started early in January in Mainpuri and Etah and on the 4th February in Farrukhabad. The greatest number relieved in this way at any one time was only 3,123 in Farrukhabad, 2,160 in Mainpuri and 750 in Etah. Gratuitous relief was closed during March and April everywhere except in the portion of tahsil Jalesar in the Etah district, known as the brackish water tract, where it continued until the 28th May. In the municipality and small towns of the Mainpuri district relief to some of those previously receiving gratuitous relief from Government was given by the Committee of the Charitable Fund until July. A test work

was opened in tahsil Jalesar of the Etah district on the 18th January but was closed on the 2nd April, having at no time attracted more than 450 workers. Apart from this no other works were started in these districts. There was practically no need for poorhouse relief. In Farrukhabad a poorhouse was in operation from the middle of January until the end of March, but never contained more than 85 inmates. Two poorhouses in Etah and one in Mainpuri were constructed as a precautionary measure, but never occupied. The number of casual wanderers also relieved by the police was inconsiderable.

Bundelkhand.

40. Bundelkhand requires to be considered separately from the rest of the Allahabad division. It has always been a precarious tract and suffered severely from famine in 1895-96-97 and again in 1905-06. In the present year all portions of the four districts of Jhansi, Jalaun, Hamirpur and Banda and the three tahsils of the Allahabad district situated south of the Jumna were to a greater or less extent affected. The three famines however present marked points of difference. The figures given in the margin show the greatest number relieved at any time in each of the four distinctively Bundelkhand districts and in Allahabad, where separate figures for the Bundelkhand portion cannot be ascertained. The figures demonstrate conclusively the greater severity of the famine of 1896-97, when all portions of Bundelkhand were severely distressed. Jalaun suffered in all three famines, and Banda was the worst of the four distinctively Bundelkhand districts both in 1896-97 and in 1908; but in 1906 only two tahsils of Banda were affected, and that slightly. Hamirpur and Jhansi on the other hand escaped more easily in the present year than in either of the previous famines. In Jhansi famine was recognized only in the Moth and Garotha tahsils in the present year, and in 1906 also the Lalitpur sub-division escaped. In Hamirpur it has already been mentioned that the work provided on the construction of the Dhassan canal and the large advances made in the autumn helped to defer the necessity for relief works until after the spring harvest. It is probable also that less of the surplus of the good harvests of 1906-07 was exported from this district than from the others owing to the greater difficulties of communication. In the two earlier famines the condition of Hamirpur approximated to that of the neighbouring districts of Jalaun and Jhansi. The Bundelkhand portion of the Allahabad district suffered severely both in 1897 and 1908, but in 1906 it entirely escaped and the test works which were started failed to attract any labourers. Speaking generally it may be said that the greater intensity of the famine of 1897, after a crop

District.	1896.	1897.	1906.	1908.
Jhansi ...	41,645	98,133	49,085	23,137
Jalaun ...	40,617	115,916	76,392	32,866
Hamirpur ...	47,960	119,609	56,492	36,559
Banda ...	133,739	297,049	5,783	127,857
Allahabad ...	*Nil.*	313,681	*Nil.*	85,870

failure less complete than that of the present year, was due primarily to the difference in the antecedent conditions, described in an earlier portion of this resolution, but partly also to the fact that since 1897 there has been an extension of the facilities for irrigation, and partly to the fiscal changes which have been introduced in recent years in Bundelkhand. Not only has a more liberal scale been adopted for calculating the remission of land revenue, but very considerable summary reductions were made in 1902 and since then the settlements of all the districts have been revised on a new principle, by which a fluctuating assessment dependent on the variations in cultivation has been substituted for the assessment fixed for 30 years, which was previously in force. Moreover, the Bundelkhand Encumbered Estates Act and Alienation of Land Act have recently been in operation in all these districts, with the result that a very considerable burden of debt has been lifted from the shoulders of the proprietary body, and the land will, it is hoped, be prevented in the future from passing out of the hands of the cultivating community.

The Bundelkhand famine of 1896-97 was practically a continuation of the famine of the previous year and operations, which had never really been closed down, were in full swing early in the autumn. On the present occasion there was little relief required before the commencement of the new year. Relief works were started in the middle of December in the Bara and Meja tahsils of the Allahabad district and in the Jalaun district, and followed in January in Banda and the Moth and Garotha tahsils of Jhansi. In Hamirpur they commenced in the middle of March. The hot weather was the period of greatest stress, as is usual with famines in Bundelkhand, where in a year of drought the spring crops can only be sown on a much reduced area, and at the end of May over 185,000 persons were being relieved on works of various kinds in the five districts. By this time almost all the dependants had been removed to gratuitous relief, and the works consisted for the greater part of small civil and aided works, the latter accounting for over 65,000 workers. These small works were particularly successful. Not less than 400 consisted of field embankments by which the value of a large area of land has been greatly enhanced; and the majority of the remainder consisted of the digging of tanks, which in dry regions, such as the Karwi sub-division of the Banda district and elsewhere, should be of the greatest value both for irrigation and for the provision of much-needed water for cattle.

Of the larger works the construction of a portion of the Belan canal in south Allahabad and the repair and construction of distributaries of the Betwa canal, which formed a large part of the work undertaken in the Jalaun district, were the most important.

Gratuitous relief commenced in the middle of December in tahsils Bara and Meja of the Allahabad district, in tahsils Moth and Garotha of Jhansi, in Banda city and in the Jalaun district. It followed in the rest of Bundelkhand during January. Prior to the spring harvest the number of persons relieved in this way in the four districts of Jhansi, Jalaun, Hamirpur and Banda was less than 39,000 (south Allahabad is excluded as there was a considerable amount of gratuitous relief also in the non-Bundelkhand tahsils); by the first week of July however, when not only had distress increased but the numbers were swollen by the inclusion of the former dependants on relief works, the maximum total of 110,000 was reached. These figures may be compared with 1897, when there were 54,000 on gratuitous relief on the last day of February and 112,000 on the last day of July. Gratuitous relief was closed in the present year in the middle of August in all parts of Bundelkhand except in the black-soil areas of Jhansi, where it closed at the end of August, in all cases with a month's final dole. A certain number of weavers also were relieved in the neighbourhood of Mau Ranipur in the Jhansi district. A much greater contrast between the two famines is in the amount of poorhouse relief required. In the present year, although poorhouses were constructed at the headquarters of most tahsils throughout the tract, there were at no time 500 persons relieved in them, whereas in 1897 there were over 11,000 persons in poorhouses at the end of July.

Scarcity of fodder was felt much more severely in the famine of 1906 than in 1897 or in 1908. In the present year, although the scarcity of fodder was probably greater in Bundelkhand than in any other portion of the province, it was not really acute except during the latter part of the hot weather, and even then only in certain parts of the Banda district, particularly the Karwi sub-division. The shortness of the water supply was there as great a difficulty as the lack of fodder, and the absence of water unfortunately prevented the utilization of the only real grazing area in the Karwi uplands. Large amounts of fodder, however, were purchased from Messrs. Abbott Brothers of Jhansi or imported from the Government forests of Bundelkhand and the Central Provinces.

The Karwi sub-division throughout the present famine was the most severely distressed area in Bundelkhand and 9 of the 16 large relief works in the Banda district, and 251 out of the 270 civil works besides a certain number of aided works were located within it. Civil works, which are more suitable for a tract such as Karwi, were undertaken from the beginning of the operations and this procedure was justified by its success. Towards the end of July it was observed with apprehension that the poverty of the cultivators in this part of the country was likely to result in a diminished area being sown with autumn crops and—what was even more serious—in the

fields which had been sown being choked with weeds through the inability of the cultivators to pay for the hire of labourers. A special scheme was therefore introduced, by which money was advanced by way of subsistence to labourers employed by poor agriculturists, part of the money being treated as an ordinary advance from Government to the owner of the land, while part was a free gift made from funds generously allotted by the Charitable Famine Fund. This form of relief continued until the beginning of September. The amount advanced from the Government allotment exceeded Rs. 36,000 (£2,400) and over 360,000 labourers were paid for a day's work. Rs. 15,000 (£1,000) was received from the Charitable Famine Fund and was given to non-occupancy tenants and sub-tenants who had no security to offer for a Government loan. The small cultivators thus assisted numbered about 7,500. This scheme, which was devised and managed by Mr. Blunt, sub-divisional officer of Karwi, proved most successful. The account of the operations in the Banda district which has been written by the Collector, Mr. Lambert, is a most valuable record for future guidance.

The Cawnpore and Fatehpur districts and the Allahabad district north of the Jumna.

Outside Bundelkhand there was little distress in the Allahabad division beyond what was caused by the high price of food. The condition of this tract was much worse in 1896-97, when in the Cawnpore and Fatehpur districts there were at one time 139,479 and 27,242 persons respectively receiving relief; and in the Allahabad district, where the maximum number on relief, 313,681, was also the maximum recorded in any district in the province, distress was not, as on the present occasion, confined to the Bundelkhand tahsils. In the present year the tract bordering on the Jumna, that is the Bhognipur and Ghatampur tahsils of Cawnpore and the Khaga tahsil of Fatehpur, where there was a decided scarcity of fodder in the latter part of the hot weather, required to be watched more carefully than the other portions of those districts; but distress never developed: the test works attracted few labourers, and apart from a small number of civil and aided works in the Fatehpur district, which during the hot weather maintained an average of 2,000 workers, there was no necessity of providing employment for labour. Gratuitous relief was required in the towns and a number of villages early in the year, but the average number of persons relieved in this way was only about 2,000 in Cawnpore and 5,000 in Fatehpur, though somewhat higher for a few weeks before the spring harvest. Gratuitous relief closed in July in the greater part of Fatehpur, and in the middle of August in Cawnpore and in the Khaga tahsil of Fatehpur, with a month's final dole in all cases. Two poorhouses in Fatehpur and three in Cawnpore were opened in January, but they attracted few inmates, and the poorhouses in Fatehpur were closed on the 1st April and those in Cawnpore in July. A small number of weavers also received relief in Fatehpur.

Similarly in Allahabad—excluding from consideration the Bundelkand tahsils—there was a certain amount of gratuitous relief, which was much reduced after the spring harvest, and a few aided works. Poorhouses also were opened at the headquarters of tahsils, but all except that in Allahabad city were closed before the hot weather. The poorhouse in the city remained open until the 1st August, and gratuitous relief was closed with a month's final dole about the same time.

The Benares division.

41. The Benares division contained two famine districts, Mirzapur and Jaunpur, and three districts Benares, Ghazipur and Ballia, affected by scarcity. In 1896-97 the distribution was somewhat similar, Mirzapur and Jaunpur being visited by famine and Benares by scarcity; but in that year Ghazipur and Ballia lay wholly outside the affected area, while the severity of the famine in Mirzapur bore no comparison with that of the present year.

Mirzapur.

The conditions of Mirzapur are so different from those of an ordinary district in the plains that the relief measures adopted necessarily diverged to a great extent from the standard plan. The district is divided geographically into three portions; the Ganges valley, the hilly tract north of the river Sone, and the distant and at times almost inaccessible areas of Dudhi and Singrauli across the Sone.

There was no famine in the Ganges valley, where crops were good and cultivators actually made money; and except for some gratuitous relief in the towns of Mirzapur, Chunar and Ahraura there was no need of relief operations in this area. Elsewhere famine was very severe and the disastrous failure of the autumn crops could not be remedied in the spring as irrigation is at present practically non-existent and temporary wells cannot be dug. Relief works under Public Works department control were confined to the region between the Ganges valley and the hills. The rest of the district was dealt with entirely by Civil agency, dependants receiving relief on the civil works. Relief works commenced in December and by the 28th March there were 12 public works and 19 civil works in operation: gratuitous relief also was being given throughout the famine area and in the large towns, the total number on relief of all kinds during March averaging 125,000. Early in the hot weather the district was visited by a severe attack of cholera; but by breaking up the large public works into smaller departmental works and extending the number of civil and aided village works, by removing the dependants to gratuitous relief and by taking the most elaborate sanitary precautions, the Collector was able to make the works practically immune from the epidemic which was raging in the surrounding villages. By the end of May there were 50 civil, 25 small departmental and 25 aided works

in operation. The first rain fell early in July and large advances, aggregating over 5½ lakhs (£36,700) were poured into the affected tracts. The workers rapidly deserted the works, and the numbers which had been over 65,000 at the end of June had fallen to 6,000 by the 1st August. The gratuitous relief circles were at the same time nearly doubled in number and the total on gratuitous relief exceeded 70,000 at the beginning of August. As the early autumn crops became ripe gratuitous relief was closed with a month's final dole on the 26th August. It had closed a month earlier in the towns. Four poorhouses remained open throughout the famine and a special famine orphanage was constructed at Dudhi. Few persons, however, got as far as poorhouses. They were caught up by the relief works, or never had to leave their villages owing to the efficiency of the civil work system and the adequacy with which gratuitous relief was administered. For purposes of famine organization pargana Singrauli was, with pargana Dudhi, placed under the control of the manager of the Dudhi Government estate, who was given the powers of a sub-divisional officer under the Famine Code. The tahsildar of Robertsganj was made a temporary Deputy Collector and was sub-divisional officer for the rest of his tahsil. These officers have been specially commended. This district also had the advantage of the services of no less than five of the military officers deputed on famine duty.

The organization of communications with the more remote areas was one of the most difficult of the problems which had to be solved by the Collector, especially in the rains when the rivers beyond the Sone are both difficult and dangerous to cross. A special mule-cart service was organized, boats were placed on all the rivers to facilitate crossing and an *ekka* (native cart) service was run to Robertsganj. The question however of communication with south Mirzapur, the difficulties of the maintenance of a sufficient food supply and those caused by the influx of residents of neighbouring states and aboriginal tribes are dealt with in the appropriate sections of this resolution. The district was fortunate in having in Mr. Wyndham a Collector who had been long resident in the district, and had an unrivalled knowledge of its conditions. The Lieutenant-Governor is able to endorse the words of the divisional Commissioner that "had the district been under an officer who was not possessed of Mr. Wyndham's great local knowledge, untiring energy and practical ability, the history of the Mirzapur famine of 1907-08 would not have been what it has been."

Family Domains.

The Family Domains of His Highness the Maharaja of Benares in the Mirzapur district were treated throughout as a separate famine sub-division, and relief was administered at the cost of Government under the control of the Deputy Superintendent

of the Domains, in view of recent orders of the Government of India which exempted the Maharaja from any special conditions as regards famine expenditure.

Of the three parganas comprised in the Domains, two lie north of the river Ganges and were not affected by famine. The remaining pargana, Kera Mangrour, was affected to much the same extent as the southern portion of the Mirzapur district, and similar difficulties had to be faced, especially in the Naugarh taluka, an extensive and hilly area with a scattered population and devoid of adequate means of communication. At one time over 14,000 persons were being relieved on works while 5,000 were receiving gratuitous relief at their homes out of a total population of 66,000 in the pargana. His Highness the Maharaja has expressed his appreciation of the manner in which relief was administered in his estate.

Jaunpur.

Serious distress in the Jaunpur district was confined to those areas which depend mainly upon the rice crop, that is to tahsil Shahganj and parganas Ghiswa and Mungra of tahsil Machlishahr. Outside this area, though a few aided works were useful in providing additional employment and gratuitous relief was necessary in Jaunpur city, there was no need for relief measures. The excellence of the spring harvest also dispelled all cause for anxiety except in the distressed area, and even there materially reduced the amount of relief which was required in the hot weather. Relief works and gratuitous relief commenced early in January and the maximum number on relief was reached in the first week of March, when there were over 53,000 persons in receipt of relief, of whom 45,000 were on works. Civil works took the place of public works in the hot weather and towards the close of the hot weather the special system of paying a higher wage than the Code rates to workers, without relief to dependants on the works or at their homes, was introduced. The system had at least the merit of minimising the number requiring gratuitous relief, but was not in operation long enough to enable exact conclusions to be drawn. The maximum on relief in the hot weather was 32,000 on the 4th July, of whom 20,500 were on civil works and 4,500 on aided works. All relief closed in the third week of August, those on gratuitous relief receiving a valedictory dole. The three poorhouses at Jaunpur, Shahganj and Machlishahr never attracted a large attendance.

The Benares, Ghazipur and Ballia districts.

Outside the districts of Mirzapur and Jaunpur, distress in the Benares division was principally the result of high prices. Certain tracts, notably the black-soil areas in tahsils Muhammadabad and Zamania of the Ghazipur district and pargana Narwan and a small rice tract in the north of Benares tahsil in the Benares district were worse off than the other portions of these districts, but speaking generally the outturn of the

spring harvest, thanks to the rain in January, which brought to fruition the labours of the cultivators, and the large advances made by Government in the autumn, put an end to the period of tension. Ghazipur and Ballia were much nearer to famine than they have been in recent times—they escaped entirely in 1896-97—and the condition of Benares was much the same in the drought of 1896-97 as in the present year. Gratuitous relief was required as early as the 1st December in Benares city and was extended first to the towns and later on to the rural tracts of the three districts during January. The maximum number receiving gratuitous relief in these districts was 14,000 on the 14th March. The spring harvest enabled a great reduction to be made, and in the greater part of the Ghazipur and Ballia districts gratuitous relief was closed in April. It continued in the towns and a few villages in Ballia and in the black-soil tracts of tahsils Muhammadabad and Zamania of the Ghazipur district until the middle of June. In Benares relief came to an end with the establishment of the rains in July. Poorhouses were opened at Muhammadabad and Zamania in the Ghazipur district, but as they attracted few inmates they were closed in April and May; in Benares two local asylums, the Kalishankar asylum and the Bhinga Raj Anathalya, were used throughout as poorhouses.

In all three districts a number of aided works were constructed, which were useful in employing a few thousand labourers during the slack season and will be of permanent benefit to agriculture. Relief to weavers also on a small scale was given in Benares city.

The Gorakhpur division.

42. In 1896-97 there was famine in the Gorakhpur and Azamgarh districts and scarcity in the Basti district. In the present year the Gorakhpur district, securing in the autumn the best harvest of any district in the province and a satisfactory harvest in the spring, entirely avoided the need for relief measures.

Azamgarh also was but slightly affected and was fortunate in obtaining at least a normal outturn in the spring harvest. A small amount of gratuitous relief with a number of aided works and a poorhouse in the early part of the year were the only direct measures of relief required.

The greater portion of the Basti district was as fortunate as Gorakhpur, but the north-western tract which borders upon the Gonda district, that is the Domariaganj tahsil and the northern portion of the Haraiya tahsil, suffered severely owing to the failure of the rice crop upon which this part of the district depends. Gratuitous relief was necessary on the 1st January, but the need for relief works did not arise until March. Thenceforward there was an almost continuous rise in the number requiring relief until the 16th May, when there were 44,687 persons on relief, of whom 37,500 were on works. The number on works then decreased on the conversion of the public works

to civil works, while the number of persons gratuitously relieved rose with the addition of dependants drafted from the works to 25,600 in the middle of July. All works closed in July and gratuitous relief a month later with a final dole. Two poor-houses remained open throughout the famine and contained at one time 464 inmates. There were also a number of aided works which provided employment for an average of 4,000 or 5,000 workers.

The hill districts.

43. In the Kumaun division the district of Naini Tal required no measures of relief and attention may be confined to the districts of Garhwal and Almora. In view of the comparatively small population, scattered over a vast area and possessing in many cases resources not dependent upon agriculture, and the liability of harvests to show great variations from valley to valley, it is unlikely that extensive measures of direct relief will ever be required in these hill districts on the scale which may be necessary in a district in the plains; but the hills have their own peculiar dangers, and whenever the unexpected failure of a harvest reduces the available stocks of grain, it is extremely difficult owing to the inaccessibility and remoteness of the greater part of the country to prevent a serious scarcity of food, and prices on such an occasion are apt to run to phenomenal rates. Such a situation occurred in the years 1890, 1892 and 1896. In the two former years a large quantity of grain was imported directly by the Government and advanced on loan. In 1896 some small test and relief works were undertaken and advances were given on a small scale. In the present year the danger was at one time probably more serious than on any of the occasions above-mentioned, and the measures adopted to meet it, being the first of their kind, are of special interest.

Though the failure of the autumn crops had been considerable, prospects of the spring harvest remained favourable until almost the end of February, and prior to that time little relief was given except in the way of advances on a small scale for subsistence. Some small works with a little gratuitous relief were also in operation in Almora. But as the months of February and March passed away without the usual winter storms, the failure of the spring harvest became certain and the situation suddenly assumed a serious aspect. The holders of stores of grain now refused to sell. In the upper portion of Garhwal, where the autumn harvest had been fair, stocks had already been depleted by the fact that thousands of people had come in from Almora, attracted by the comparatively low prices which had hitherto prevailed owing to the expectation of a good spring harvest, and had bought from the local stores grain which would have been invaluable later. The spring harvest in the upper parganas of the Almora district was fortunately a good one, and large quantities of grain were

exported from these parganas to the more seriously affected areas. On the 1st April scarcity was recognized in Garhwal and some small civil and aided works with gratuitous relief were started ; but these measures were not on a large scale and the direct relief thus given in the two districts of Garhwal and Almora never provided for more than 7,000 persons at any one time. On the works the most suitable system was found to be the payment of wages somewhat above the Code rates and approximating to the normal wages of labour, without relief to dependants.

The backbone of relief in both districts was the special measures introduced to encourage the importation of grain. These measures were of two kinds. In the first place advances free of interest were offered to local grain-merchants to assist them to import grain into the interior. In the second place a system of grain credit orders was devised, by which inhabitants of the hills were given grain as a loan to the amount specified in the credit order on presentation at depôts established at the foot of the hills. The keynote of the system was that borrowers were required to import for themselves, which they did naturally at the cheapest rates of freight, while the inconvenience of making a journey to the foot of the hills proved an excellent automatic check on unlimited borrowing. The contractors who undertook to supply the grain at the depôts to holders of grain orders took large advances from Government which were granted free of interest. In return for these loans they agreed to sell the grain at rates calculated on the rates prevailing at the railhead *plus* the actual cost of carriage, with a small allowance for miscellaneous expenses : they also bound themselves to maintain at the depôt a stock equal to about 15 days' sales and to provide grain of a good quality. The terms of the contract were as a rule faithfully observed. Government on its part undertook to purchase all the grain left over at the depôts at the close of operations. This system which was, in fact, introduced earlier in the year but had then little vogue, was a phenomenal success, and from the middle of March until the middle of July there was a large and persistent demand for the credit orders. The value of the grain advanced on these credit orders was about 3 lakhs (£20,000) in Garhwal and Rs. 2,30,000 (£15,300) in Almora, representing about 3,400 tons of grain. The advances taken by grain merchants amounted to an additional lakh of rupees (£6,600). The carriage of the grain gave employment to a very large number of people, with the result that the measures of direct relief were practically confined to such persons as were unable through lack of security to take grain orders. The success of the system depended entirely on the non-interference of Government with private trade. The small traders, realising that Government would not compete with them, gladly took small advances with the aid of which

they brought up considerable quantities of grain into the upper hills. The people obtained all the food they wanted without the necessity on the part of Government to import a single ton of grain ; and without any further loss to Government beyond the interest on the money advanced to grain merchants, the pay of the small special staff entertained in connection with the grain order distribution (about Rs. 2,000, or £130) and a small loss on sale of the surplus stocks left over. The latter will probably not amount to more than two or three thousand rupees (£130 or £200) and would have been less had not a sudden outbreak of cholera in July checked the importation and prevented the disposal of all the stores in the depôts before they were closed.

One further measure requires to be mentioned. It was considered necessary at the beginning of April to close the pilgrimage routes to the shrines of Badrinath and Kedarnath in north Garhwal as had been done in the year 1890. This was effected by posting an officer at the bridge over the Ganges at Lachmanjhula, the one available route from the plains, to turn back any pilgrims who might attempt the journey in spite of the wide publicity which was given to the prohibition of the pilgrimage both in this and in other provinces. This task was accomplished with marked tact and discretion by Pandit Chakra Dhar, tahsildar. The pilgrimage to Badrinath and Kedarnath brings over 50,000 persons annually into Garhwal, where they stop on an average about five weeks. To feed these persons nearly 1,500 tons of grain would have been required, mainly in those portions of the district most remote from the railway. It would have been impossible to import this quantity of grain and grass even would not have been available for the pack-animals. To have permitted the pilgrimage would have been to invite a catastrophe. The proposal to stop the pilgrimage was welcomed by all the more intelligent members of the community and the late Rawal or High Priest of Badrinath himself supported the proposal in a letter which was published. As an instance of the spirit in which the measure was received may be mentioned the case of Ram Dhan Dass, a banker of Firozpur, who after being turned back from the bridge presented a gift of 100 camelloads of grain to relieve the scarcity in Garhwal.

Dehra Dun.

44. Dehra Dun was the only district in the Meerut division in which scarcity was seriously felt. The area affected was the mountainous tahsil of Chakrata and a portion of tahsil Dehra. The remainder of the Dun is protected by a network of small canals. The situation in this hilly tract was similar to that in the other Himalayan districts, the most serious feature being a threatened shortage of foodstocks. This did not however assume serious proportions and the offer of advances to grain merchants to encourage importation of grain met with little

response. The hillmen, for whom work was provided on a small number of aided works and civil works managed by contract, were able in the intervals of work to bring up all the grain they required from the plains. The numbers relieved were at all periods very small scarcely exceeding 1,000 at their maximum. Of these a few hundreds received gratuitous relief in their villages. The nature of the country made the supervision of these operations a very arduous task, the heaviest part of which was efficiently performed by Lieutenant-Colonel Leslie, Assistant Superintendent in charge of the Chakrata sub-division.

The Lucknow division.

45. Distress was acute in the north of the Lucknow division, less severe in the centre and slight in the south. Thus Kheri was the most severely affected district; Sitapur suffered more than Hardoi, while Lucknow, Unao and Rae Bareli can be classed among those districts where there was little more than the distress consequent upon high prices. The history of 1896-97 was different. On that occasion the famine was severest in Hardoi, was acute in Lucknow, Sitapur, Unao and Rae Bareli, while Kheri almost entirely escaped.

Kheri.

The Kheri district has had no previous experience of a severe famine during the period of which there are records. In 1896-97 the greatest number of persons relieved at any one time was only 2,000, whereas in the present year both the autumn and spring harvests were almost total failures, and the number of persons relieved exceeded 100,000 both in March and in August. Gratuitous relief commenced at the beginning of January and full relief measures followed in the middle of that month. There were 14 large works in operation in March, which on the 28th March relieved 59,450 workers with 24,813 dependants. Early in the hot weather these works, with the exception of two railway embankment works, were converted into groups of civil works, the dependants of all workers being given gratuitous relief. The number of workers remained between 20,000 and 30,000 throughout the hot weather and the early months of the rains, and when the works were closed at the end of August, the 19,000 remaining workers received a month's final dole. Additional employment was provided throughout the famine by over 100 aided village works, with an average total attendance of 4,000 or 5,000 workers. The numbers requiring gratuitous relief rose steadily from the commencement of the famine almost until its close. The increase was very noticeable in the latter part of July and August, the greatest number 76,794 being reached on the 15th August. This increase would have taken place even earlier had it not been that much assistance was given by a good mango crop. At the same time it is remarkable that only one poorhouse was opened in this district and the number of inmates never exceeded 142. The number also of casual wanderers

relieved by the police was quite insignificant. These two facts indicate the adequacy of the measures of relief.

Sitapur.

In the Sitapur district distress was much more acute in certain areas than in others. The need for gratuitous relief was established in pargana Kondri North as early as the 1st December, and followed in the rest of the district during January. In the middle of that month famine was recognized in the whole district and relief works were started: a maximum attendance of 51,000 workers and 22,000 dependants was recorded by the end of February. At this time the total number on relief was 87,611, and it continued above 80,000 throughout March. The spring harvest, though sown on a reduced area, gave a good outturn in most places and famine practically came to an end in tahsil Sidhauli and pargana Biswan. A good mango and *jaman* crop (*Eugenia jambolana*) also helped to relieve the situation. On the conversion of the majority of the relief works to civil works early in the hot weather there was a marked fall in the number of workers, which averaged about 10,000 during June and July. All works closed at the end of August. The most important of the public works consisted of the construction of portions of the Sitapur-Barhwal Railway, which furnished work for several civil charges also during the hot weather. Only 13 aided works were undertaken and the amount of relief which they afforded was small; but the drainage of the tanks and ponds at Mahmudabad, which was managed by the Raja of Mahmudabad, was a work of considerable importance. The number of persons on gratuitous relief, after the inclusion of the previous dependants on works, reached a maximum of 44,000 on the 18th July. A month's final dole was given at the end of August. Of the five poorhouses which were opened early in the year, those at Sidhauli and Sitapur closed on the 1st May and were probably superfluous. The last poorhouse closed on the 15th September. The total number of inmates never exceeded 400, and for the greater part of the period was considerably less. A certain number of weavers also were assisted by means of advances. There was never any serious scarcity of fodder, but the north and west of the district had less than the rest and some 300 tons of hay from the Government forests were imported and sold or advanced at five annas a maund (Rs. 8-8-0 a ton).

Hardoi.

The Hardoi district escaped very lightly from the famine of the present year compared with its experience in 1896-97, when at one time there were nearly 150,000 persons in receipt of relief. In the present year the very considerable riverside tracts to the North and West of the district secured a moderately good harvest even in the autumn and this portion of the district lay outside the distressed area. Four poorhouses were opened as early as the first week of November and test works at the beginning of

December; but it was not until January that the need of gratuitous relief was felt and relief works were not required until the middle of that month. When the famine was at its height on the 21st March there were 33,906 persons on relief, of whom 9,337 workers with 7,066 dependants were relieved on public works. Early in the hot weather the public works were, with the exception of two large drainage works, converted into civil works and in June the system was introduced of paying a special wage above Code rates to workers, without relieving dependants on works or at their homes. This system during the two months when it was in force was a pronounced success. Seventy-two aided works provided a considerable amount of supplementary relief especially during the hot weather. By the end of July all works had been closed and the gratuitous relief, which had been reduced from over 15,000 in March to less than 6,000 in June, ceased on the 21st August with a month's final dole. It was found possible to close three out of the four poorhouses at the beginning of May, the fourth remaining open until the 24th August. The number of inmates scarcely exceeded 200 at any time and during the later part of the famine was much less. A number of weavers were helped, as in the Sitapur district, by means of advances. Scarcity of fodder was felt more severely here than in the other districts of the Lucknow division, and over 2,000 tons of forest hay were imported, the greater part being advanced as a loan at five annas a maund (Rs. 8-8-0 a ton) and the bulk of the remainder sold at the same rate.

Lucknow, Unao and Rae Bareli.

The three remaining districts of the Lucknow division were outside the area which required the application of a full measure of relief. Distress in the present year centred in North and not in South Oudh in direct contrast to the experience of the last great famine. Consequently except for gratuitous relief, a few aided works and a small amount of poorhouse relief there was no necessity in the present year for direct relief by Government. Gratuitous relief commenced in all three districts in January and continued in Unao and Rae Bareli until late in June. In the Lucknow district little gratuitous relief was given outside the city, but in the city, where there is a large population living on very small fixed incomes, this form of relief continued until the middle of September. The amount of private relief given by non-official gentlemen and the assistance rendered to the Government officials in the conduct of relief was a noticeable feature of the situation in all three districts and in particular in Lucknow city.

The Fyzabad division.

46. The districts of the Fyzabad division fall into four clearly marked classes according to the varying degrees of distress. Famine was most severe in the Bahraich and Gonda districts, was severe, also, but in a lesser degree in the Bara Banki district, was

comparatively slight in Fyzabad and Sultanpur and was non-existent in the Partabgarh district. The contrast with the distribution of distress in 1896-97 is remarkable. In that year there was famine only in Bara Banki, serious scarcity in Fyzabad, Sultanpur and Partabgarh, while Gonda almost entirely and Bahraich entirely escaped.

Bahraich.

The Bahraich district has the distinction of recording the greatest number of persons on relief in this famine of any district in the province. The district was believed in view of its past history to be practically immune from famine, and the calamity of the present year was felt all the more severely by a population entirely unaccustomed to face a serious failure of the crops. There was therefore, when the full extent of the famine was realised, a rush of labourers on to the relief works to a much greater extent than in any other district, and the district staff was severely taxed to meet the crisis. Relief works were opened in December, but the rush on to the works did not commence until January; at the end of that month there were 70,000 on works, at the end of February 166,000 and on the 28th March 222,000. By this time 21 works were in full operation and 7 more were opened subsequently to relieve the pressure. On some newly-opened works the numbers rose to 7,000 or 8,000 within a week of their being opened, and however rapidly they were sub-divided the resultant charges filled almost as speedily. One charge for instance was the parent of no less than six other charges. The number on works never fell below 180,000 even during the spring harvest, and was checked only after the fall of rain in the middle of May, when the large charges were broken up into small works, of which a net-work covered the whole district, and the host of dependants was drafted to gratuitous relief. The difficulties of famine organization were augmented in the hot weather by a severe epidemic of cholera, which was most successfully dealt with by the efforts of the district staff. Mr. Spencer, Deputy Commissioner, who is responsible for the admirable organization of relief in this district, had the benefit of the services of five Military officers to assist him in the control of operations. The setting in of the rains in June effected a great reduction in the number on relief works which fell to 17,000 by the 22nd August. The works were closed with a parting dole to the workers on the 29th of that month. Gratuitous relief was being given to about 40,000 persons before the inclusion of the large number of dependants; subsequently it reached the large total of 138,000, but was much reduced before it closed with a final dole towards the end of August.

Four poorhouses were opened and at one time contained nearly 950 inmates. The relief, however, given by the police to casual wanderers was remarkably small.

Gonda.

The Gonda district also had no previous experience of a severe famine. The part most seriously affected was the north-eastern portion of the district, north of the Kuwana river. In this area the relief programmes were least complete, as a failure of rain in the sub montane portion of the district had not been considered possible, and great efforts in consequence were necessary in the autumn to make sufficient preparation to meet the impending famine. It should be mentioned that in the worst affected tract only 15 miles of road were on the original public works programme, whereas 75 miles were actually completed in the course of the famine, and six special overseers had to be employed in preparing projects for civil and aided works, the original village works programme being entirely abandoned. Famine was recognized early in December and the measures of relief expanded steadily until the 14th March when there were 166,000 persons on relief, of whom 154,500 were being relieved on works. The numbers fell below 100,000 during the harvesting of the spring crops, and subsequently rose to 126,000 on the 9th May, their maximum in the hot weather. From this date field work became available in many places, and a good mango and *sawan* crop assisted in reducing the need for relief. The number of aided works was now increased and a few civil works were started where aided works were not available in order to induce the workers to return to their homes. The dependants of workers also were gradually transferred to gratuitous relief. The monsoon arrived early in June and the works rapidly closed; but during July and August there was a steady expansion in the number requiring gratuitous relief, which reached the high figure of 79,600 on the 22nd August. By the end of August it was found possible to close Government relief with a month's final dole to those on the gratuitous relief lists and in the three Government poorhouses. The poorhouse population had never been large, varying between 200 and 300 throughout the famine. Relief was given during the hot weather to two small communities of weavers.

Special mention must here be made of the action of Sir Bhagwati Prasad Singh, K.C.I.E., Maharaja of Balrampur, who undertook the cost of relief operations on his vast estates in this and other districts. The Maharaja supported many thousands of persons gratuitously until the end of June and also undertook 70 unaided works and maintained two poorhouses. On these measures of direct relief he expended three lakhs (£20,000) and he also advanced more than 2½ lakhs (£16,600) to his tenants in the Gonda district alone. Outside the Balrampur estates there were 36 private works undertaken by non-official gentlemen at their own cost. Several gentlemen also supported private kitchens, and many persons in various other ways contributed to the cause of charity.

Apart from Bahraich and Gonda the most severely affected district of the Fyzabad division was Bara Banki. This was the only district in the division in which famine was declared in 1896-97, but in that year the distress was of short duration : the maximum number of persons relieved was 36,655 at the end of January, and the famine practically ended with the spring harvest. In the present year the serious failure of the crops in the autumn was followed by an almost equally extensive failure in the spring.

Bara Banki.

Relief commenced with the opening of five poorhouses on the 21st December. Gratuitous relief followed on the 1st January. The spring sowings were late and it was not until January that scarcity of employment for the labouring classes began to be felt. The first test work was opened on the 5th January and two others on the 20th January. These works filled rapidly and it was found necessary to declare famine in the district on the 3rd February, when the three test works were converted into departmental relief works and nine other relief works were opened in rapid succession. The famine prior to the spring harvest was most severe on the 14th March, when the number on relief was 50,624. The harvesting of the spring crops effected a temporary diminution in the number which fell to 27,712 on the 11th April. From that date there was a steady increase. Early in May civil works were substituted for the departmental works. On these civil works dependants were not relieved and were not transferred to gratuitous relief, but towards the end of May a special wage was introduced for workers, namely 10 pice for men, 6 pice for women and 4 pice for children, in place of the wage of 7, 5 and 3 pice on the 11-ser (22¾lbs.) basis which had been in force on the departmental works. This special wage was intended to cover the cost of the support of dependants. The numbers on relief continued to increase until the 11th July, when they reached their maximum of 61,838, of whom nearly 50,000 were workers on civil or aided works. The long delayed rain fell on the 13th July. The special wage was reduced and operations were rapidly closed, as work in the fields increased. All works were closed by the end of the month, and on the 15th August gratuitous relief ceased with a month's valedictory dole. The number in poorhouses was never large ; it reached 673 on the 8th February, and from that date decreased rapidly as the other forms of relief expanded. Three of the poorhouses were closed in the middle of April and one in the middle of May. The remaining poorhouse at Nawabganj was closed on the 15th August, when a month's valedictory dole was given to all the inmates.

In addition to the relief above described a number of the poorer weavers received special relief. The number averaged about 1,000 from March to July, but at one time in the last week of March 3,218 weavers were in receipt of relief.

The most important work constructed by famine labour in this district was the embankment of 21 miles of the Sitapur-Barhwal railway and a large number of the other works consisted of the improvement of old, or the construction of new feeder roads to the railway. One hundred and seventeen aided works were undertaken and formed no inconsiderable part of the relief afforded. The number of persons on these works was nearly 20,000 on the 23rd May. To meet the scarcity of fodder 600 tons of hay were received from the forests of Gonda and Kheri and disposed of for the most part at five annas a maund (82½lbs.). A considerable quantity, however, was destroyed by a fire caused by incendiaries.

The co-operation between the district authorities and the leading landholders was one of the features of the situation in this district. Not only the aided works, but the civil works also were almost entirely managed by non-official gentlemen. Raja Sir Tasadduq Rasul Khan, K.C.S.I., of Jahangirabad gave gratuitous relief to his tenants throughout the whole period of the famine, and a number of other leading landholders largely supplemented the relief given by Government, particularly by the distribution of large advances to their tenants. In the distribution of gratuitous relief, in the purchase of plough-cattle and in the selection of suitable recipients for Government advances and for gratuitous relief, the mutual co-operation of non-officials and officials contributed more than anything else to the successful issue of the relief operations.

Fyzabad and Sultanpur.

The districts of Fyzabad and Sultanpur were at no time severely distressed. Although famine was declared in the present year, whereas in 1896-97 "scarcity" only was recognized, it is probable that there was little difference in the degree of distress in the two periods. The largest numbers on relief at any one time during the present year were 32,512 in Fyzabad and 30,382 in Sultanpur on the 29th February. The numbers decreased rapidly as soon as the harvesting of the spring crops commenced: and the harvest was of sufficient excellence practically to put an end to such distress as existed. Operations commenced early in January with the opening of four poorhouses in each district, in addition to the permanent poorhouses already in existence. They were never largely attended and all except the two poorhouses at headquarters were closed during March and April. The two remaining poorhouses continued open until the 28th July in Sultanpur and the 15th August in Fyzabad. In January also testworks were started, and as the number of workers increased they were converted into relief works early in February, when the declaration of famine was made. Five works in all were in operation in each district, and the greatest number relieved on them was 14,766 in Fyzabad and 16,891 in Sultanpur at the end of

February. Thenceforward the numbers fell rapidly: all the works were closed by the end of April, and the declaration of famine was altered to one of scarcity on the 1st May. Gratuitous relief was in operation from the beginning of January until the 25th July, when valedictory doles were given. Prior to the spring harvest the numbers exceeded 10,000 in each district, but were considerably reduced in the hot weather; gratuitous relief in the Tanda and Akbarpur tahsils of Fyzabad was discontinued early in May. Government also undertook the relief of a small number of weavers at Tanda. Several hundred tons of hay were imported from the forests to meet the threatened scarcity of fodder. It was found valuable in Sultanpur, but in Fyzabad there was little demand and the bulk of the hay was transmitted to Allahabad. In both districts a number of aided works, consisting in almost all cases of tanks, and a few private works were constructed, and these continued to support several thousand workers throughout the hot weather. They were of use in providing additional employment within reach of all portions of the districts, but in Sultanpur at any rate the demand for work was so small that in some cases it was with difficulty that sufficient labourers were found to complete the works which had been undertaken. In addition to other private charity three poorhouses were opened by private persons in Fyzabad early in December, and continued to support a certain number of inmates until the opening of the Government poorhouses.

Partabgarh.

The remaining district of the Fyzabad division, Partabgarh, was outside the area of distress and no relief operations of any kind were required, although here as elsewhere relief in revenue and large advances were given. This district was therefore better off than in 1896-97, when its condition approximated to that of Fyzabad and Sultanpur.

Rampur and Tehri States.

47. The Rampur and Tehri States were not severely affected by distress. In Rampur the autumn crop yielded at least half the normal outturn. As regards the spring harvest, large facilities exist for irrigation, and although there was less water in the rivers than is usual in other years the supply was sufficient for general purposes of irrigation. Distress would have occurred only if the winter rains had entirely failed. As it was, no anxiety was felt after the spring harvest. There was a great demand for labour throughout the year, much of which was on earthwork in connection with road repairs and canals on which work was undertaken on a much larger scale than in ordinary years, and very high wages were obtainable. A standing poorhouse also exists and even in normal years a large number of poor *parda-nashin* widows and cripples are maintained out of charitable funds and endowments. In addition gratuitous relief was extended to a number of poor persons at a cost of

Rs. 4,662 (£310), and suspensions of revenue were made aggregating Rs. 1,93,230 (£12,882). Three test works which were started attracted very few labourers.

In the Tehri State conditions were somewhat similar to those prevailing in the British district of Garhwal. There was sufficient rainfall in the upper hills where the outturn of the autumn harvest was fair or good. The crop failure was serious only in certain pattis, which contain a population of 127,000 persons out of a total population of 268,885. But even in these pattis there was much irrigated land, and, as in Rampur, distress would have been serious only if the winter rains had entirely failed. The winter rains were sufficient to secure a good outturn of the irrigated crop, but as no rain fell from the 3rd February to the end of March, the outturn of the crops on unirrigated land was very short. Prices ruled exceedingly high, common rice selling at 4½ sers (9¼lbs.) and wheat at 6 sers (12¼lbs.) per rupee, and in portions of the State there was a danger of food stocks running short. Early in April a chief officer was appointed by the Raja to superintend relief operations. Three small relief works were opened on which wages were offered slightly in excess of the Code rates, but they were not largely attended. Grain depôts were opened at Tehri, Dharasu, Pilkhi and Kirtinagar, to which grain of the value of Rs. 25,000 (£1,666) was imported. The grain was advanced on credit to villagers whose supply of grain was exhausted and who could not pay cash. An arrangement was also made by which residents of the State could obtain grain on credit at Dehra. Grain was also distributed gratuitously to persons eligible for gratuitous relief, and the distribution of grain from the state *sadabart*, or charitable fund, was increased. Notices were issued to stop the pilgrimages to Gangotri and Jamnotri, and muafidars and jagirdars were encouraged to make advances and to help the people of their respective muafis and jagirs. The State also ordered the suspension of a certain amount of revenue. The situation, however, was never serious, as apart from agriculture most of the villagers in Tehri possess other resources.

The Darbars of both States did all that was necessary to relieve distress.

CHAPTER IX.

The operations of the Public Works department.

48. There are three circles or charges of Superintending Engineers. The first includes the civil divisions of Meerut, Agra and Rohilkhand and was little affected by famine. The second includes the whole of Oudh and Kumaun. The third includes the Allahabad, Benares and Gorakhpur divisions. All the operations in the province under the control of the Public Works department were undertaken by the existing staff with hardly any additional assistance except in the subordinate staff.

The services of one Executive Engineer were lent by the Madras Government. Four Temporary Engineers were engaged in January and February, but these appointments were really made to fill gaps in the permanent establishment in the ordinary course and not specially for famine relief works. With the staff available, it was not found possible to give effect to the provisions of paragraph 42 of the Famine Accounts Manual, which directs that an Assistant Engineer should be posted to each division to assist the Executive Engineer with his audit and other duties.

The 41 military officers, whose services were lent by the Government of India, were employed not merely in the inspection of relief works but in supervision of all forms of famine relief under the general control of the district officer. The inspection of relief works must always form an important part of the duties of such officers, but their services were found to be most valuable in the other branches also of famine relief. Seven Assistants Superintendents of police, who were taken from the Police Training School, were also employed on this duty.

The appointment of officers in immediate charge of relief parties was made by the district officer. These officers-in-charge were mostly permanent naib tahsildars and kanungos, but a fair number of outsiders were also engaged for the occasion. The permanent men, as a rule, did extremely well, as did the majority of the outsiders, though some, as was naturally to be expected, proved incompetent and gave considerable trouble through being unaccustomed to the preparation of accounts and unpunctual in their submission to District Engineers.

There were a number of visiting inspectors on the lists of Superintending Engineers who had previous experience of famine work, but most of these men who were re-employed proved incompetent. A number of fresh applicants, who had

professional training, were appointed and these men on the whole rendered valuable assistance in supervising the work.

The provision of work agents, who are practically overseers, proved the most difficult part of the administration. There were plenty of applicants for the posts, but for the most part they were men of an inferior stamp who had not the requisite qualifications and whose measurements were unreliable. The best of them came from the very limited supply of men who had been at some time or other in the employ of the Public Works department as road agents and work munshis (clerks). As the accuracy of the measurements of work done and the correct deduction of fines are dependent to a great extent on the ability and integrity of the work agent, the question of the recruiting and training of this class of men for future famines needs and will receive careful investigation. Thirteen non-commissioned officers and men, whose services were kindly lent by the Officer Commanding the 3rd Sappers and Miners at Kirkee, were employed as work agents in the Jaunpur district under Lieutenant Richardson, R.E. Their work was invaluable and the system of employing such men under regimental officers as work agents could be advantageously extended in any future famine.

Cashiers were appointed on the recommendations of men of standing in the districts or were nominated by the district treasurers or by the officers-in-charge themselves.

Good clerks and muharrirs (writers) were difficult to find. The pay offered seems too low to attract the right stamp of man, and it will probably be necessary to raise the scales of pay in future for men of this class. The chief difficulty, as regards clerks, was to get men with any knowledge or experience of accounts work, which forms the most important part of their duties. This difficulty was experienced both in the provision of clerks for camp offices and to assist in the rush of work in the divisional and district offices.

Only seven subordinates could be deputed specially for famine work, two to the second circle and five to the third. In the majority of cases the existing subordinate staff in the affected districts had to take up famine relief work in addition to their ordinary duties, which however were comparatively light while the famine lasted.

The only rearrangement of the ordinary public works charges made solely for famine relief purposes was the formation on the 7th March 1908 of the Mirzapur special famine division for the relief works of the Mirzapur and Allahabad districts. In all other cases the public works charges were not altered for famine relief works. It should however be mentioned that in February 1908 the ten public works divisional charges of the province were split up and five new divisions were formed with headquarters at Saharanpur, Farrukhabad, Sitapur, Gonda and Cawnpore. This

rearrangement was unfortunately made at an inconvenient time, near the close of the financial year, and caused considerable confusion at the time. In the later stages of the famine, however, it proved a great help in relieving the pressure on the local Public Works staff. The Allahabad district was split up at the same time into two sub-divisions and until the famine operations closed one of the sub-divisional officers was in charge of famine works only.

Allusion has already been made to the inadequacy of the programmes of relief works at the commencement of the famine. In a few districts the existing programmes proved sufficient and were entirely adhered to, but in the majority of cases they had to be revised while the relief operations were in progress. All the programmes provided for the relief of a numerically sufficient quantity of units, but most of them included comparatively useless works, such as road raising or road widening and tank excavation, while works of greater utility were found to be available in the districts concerned when the famine occurred. Moreover the intensity of famine was unevenly distributed in districts and certain tahsils of some districts were found to be inadequately provided for, and the programmes for these districts had to be revised in consequence. In the Agra and Muttra districts of the first circle useful work was found in the construction of irrigation embankments as also in the Jalaun, Banda, Mirzapur and Allahabad districts of the third circle. In the Sitapur division the embankments of the Barhwal-Sitapur, Rosa-Sitapur and Balamau-Sitapur Railways were utilized as relief works, and in the Fyzabad division railway feeder roads provided more useful work than the raising of district roads entered in the programmes. Part of the Belan canal in the Allahabad district and many miles of canal excavation in the Jalaun district were also carried out as relief works though they were not entered in the original programmes.

It is intended in future to make every programme complete in itself for each district by including therein not only road raising and tanks, but also all canal and railway works which are likely to be taken up in the district, sanctioned and unsanctioned works being entered separately as heretofore. Programmes so prepared will, it is considered, be more useful as they will contain more works of real utility than at present. A committee which is about to be appointed to enquire into the working of the Public Works department in the late famine will be directed to investigate the general question of the likely works of utility available in each district. These will be more closely examined by the district Public Works department staff, whose proposals will be tested during the cold weather of 1909-10 by a peripatetic committee consisting of one Civil officer and one Public Works department officer.

By the end of September 1907 a careful count had been made of the available reserve of famine tools and orders were

issued in October by the Chief Engineer for the collection, in consultation with the civil authorities, of an adequate supply in the districts where famine was anticipated.

In the third circle it was found that the reserve of tools in hand since the famine of 1905-06 was almost sufficient for preliminary requirements, especially in the Jhansi division, but estimates were framed to provide for a reserve of five complete charges over and above these requirements, and a special reserve of 50,000 spades for emergency demands was collected at Allahabad. This latter reserve was freely drawn upon by the third circle but was not utilized, as it had been intended to be, to any extent by the other circles. The supply of contingencies also was arranged for well in advance of requirements. No difficulty was experienced in obtaining tools and plant of both English and local manufacture. The demand for baskets was met without difficulty by the local markets, supplemented by supplies from the jails. The reports received on the first consignments from the jails showed that, owing to the unskilled labour employed, the baskets turned out were of poor quality, but they improved later on, although the jail-made article never equalled in quality the baskets purchased in the open market.

In the second circle the estimate of requirements of tools and plant proved to be excessive. Owing to this and to the irregular action of certain officers, who made purchases without the sanction of competent authority, a large quantity of tools and plant was obtained in excess of requirements. In the Gonda division this was due in a large measure to the appointment of a Temporary Engineer to the division who was not fully conversant with the rules and regulations of the department, but in the Sitapur division, it must be regretfully admitted, the extravagant purchase of tools and the high prices paid for them were due to dishonesty on the part of the Engineer temporarily employed in charge of the division who was convicted of bribery and sentenced to eighteen months' imprisonment. It is essential that in future arrangements for the provision of tools and plant for famine works should receive more supervision at the hands of the Superintending Engineers, and that the permanent reserve of tools and plant should be much increased, and should be stored at convenient centres such as Agra, Allahabad, Jhansi and Lucknow. This question will, however, come under the cognizance of the committee already referred to.

In place of grass (or *sirki*) huts for the camp staff, tents (*pals*) were purchased on several works. They are very little more expensive when *sirki* is at a premium, they are easily moved, less liable to damage and loss by fire, and lastly they have a definite value at the end of the operations, whereas the grass huts have none. In the Jalaun district it was found most convenient, in places where the camps were stationary almost throughout the operations, to house the camp staff in

mud huts constructed by famine labour and roofed with *sirki*. This system added greatly to the health and comfort of the staff and is recommended for adoption in future on all large works where the camps are stationary for long periods, though the initial expenditure is heavy.

The works taken up as test works were as a rule those which were in the famine programme, or, at any rate, suitable for large relief operations and the full charge staff was appointed at once for training in order that when famine conditions were declared, the test works might be converted into relief works without delay or disorder.

With few exceptions, the organization of the relief charges was in strict accordance with the Code rules and it was found to work most satisfactorily. The individual group task system was in nearly all cases adopted, and only in a few districts were gang tasks imposed. In Jaunpur, at the instance of the Collector, the experiment of giving each group of workers fourteen days' work in the same place instead of six days was tried; this facilitated the checking of tasks but it rendered the inspection of work more tedious as a full charge was thus spread over six or seven miles of road. The tasks imposed were regulated locally in accordance with the nature of the soil and the wages paid were in accordance with the table in form C—XII (page 119 of the Famine Code).

In the month of May most of the large public works were split up and replaced by small works, the object being to provide work for the labourers nearer their homes. In some instances these smaller works were conducted as civil works carried out without the aid of the Public Works department, but in several districts, *e.g.* Mirzapur, Allahabad and Bahraich, the groups of works continued to be carried out in the manner laid down for public works, except that dependants were not relieved on the works; the duties of muharrir and work agent were combined and each small work was in charge of a head muharrir who was given a permanent advance from the charge officer and rendered his accounts weekly. These works were not really civil works managed by the Public Works department as contemplated in paragraph 121(*b*) of the Famine Code since the District Engineer was placed in funds by, and rendered his accounts to, the Executive Engineer, in exactly the same way as in the case of large public works.

The following works have been executed in the course of the recent famine :—

(*a*) Roads raised	...	1,430 miles.
(*b*) Metal quarried (41 quarries)	...	3,148,404 cubic feet.
(*c*) Railway embankments raised	...	64 miles.
(*d*) New canal excavated	...	17 miles.
(*e*) Canals remodelled	...	66 miles.
(*f*) Irrigation embankments made	...	52 in number.

(g) Irrigation drains cut ... 22 miles.
(h) Field embankments ... 16 miles.
(i) Tanks excavated ... ... 299 in number.

In all 1,386,298,090 cubic feet of earthwork have been carried out and 3,148,464 cubic feet of road metal have been quarried as against 1,633,052,554 cubic feet of earthwork and 5,869,407 cubic feet of metal executed in the famine of 1896-97.

The canal works and the irrigation drains were executed with the assistance of the Canal department and are works which in the regular course of events would have been taken up by that department as ordinary works. The same may be said of the irrigation embankments, although some of those constructed in the Banda district, which were undertaken without the assistance of the Irrigation branch, will require some additional masonry work before full advantage can be derived from them.

The total expenditure on relief works executed by the Public Works department is shown in the table below in which the expenditure in 1896-97 is also given as far as available for purposes of comparison :—

	Rs.	1907-08. Rs.	1896-97. Rs.
Workers—			
Wages of workers ...	67,84,137		
Work establishment ...	5,83,000		
Shelter	3,59,464		
Miscellaneous expenditure ..	8,08,079		
		85,34,680	1,16,77,295
		(£568,979)	(£778,487)
Gratuitous relief—			
to dependants and doles to workers at the closing of the work... ...		9,96,699	17,90,006
		(£66,446)	(£119,330)
Establishment		1,26,379	3,77,844
		(£8,425)	(£25,190)
Tools and plant		17,04,313	6,04,230
		(£113,621)	(£40,283)
Total ...		1,13,62,071	1,44,49,375
		(£757,471)	(£963,290)

These statistics need some explanation before they can be used for the purpose of comparison. In the first place the details included under works are not separately specified in the resolution on the famine of 1896-97. In the second place the Sunday and non-working day doles, which represent an item of approximately 10 lakhs (£66,000) are included in the present year under wages of workers, whereas in 1896-97 they are classified as gratuitous relief. Excluding this item, the cost of dependants amounts to Rs. 9,96,699 (£66,446) in 1907-08 as against Rs. 8,27,038 (£55,136) in 1896-97. Some difficulty has been experienced throughout in making an exact comparison

between the expenditure under different heads in this famine and the previous famine owing to the fact that provincial figures are not available under sufficiently detailed heads for the previous famine and the figures for the various Public Works divisions in that year have not been compiled in all cases on the same principles. It is intended on the present occasion to call for a uniform report with sufficient statistical detail from each division where operations were undertaken, which with the district final reports will form, it is hoped, an adequate record of the recent famine operations for future information.

The expenditure on tools and plant is excessively high in comparison to that of 1896-97. The Public Works department supplied tools to most of the civil charges, but not much can be allowed on this account except in the Mirzapur district and the Karwi sub-division of the Banda district since the civil works in most cases took over from the public works, which they superseded in the hot weather, the existing tools and plant. Another reason was that a sum of approximately 3 lakhs (£20,000) was expended on tools and plant and miscellaneous contingencies in districts where no public works were in fact opened. There may have been some miscalculation on this account, but in the main it was a necessary precaution and in accordance with the policy laid down by Lord MacDonnell's Commission in 1901. A considerable proportion of the sum expended was in the Rohilkhand division, where the arrival of the winter rains in the middle of January alone prevented the necessity of opening relief works. It was essential that preparations should be well in hand in case the winter rains had failed. In any case a considerable addition has been made all round to the existing reserve of tools and plant which at the commencement of the famine was found to be seriously deficient. A complete count is being made and though figures from all circles are not as yet available, those which have been received show a very satisfactory increase in the reserve over that in existence last autumn. The greater portion therefore of the amount expended on tools and plant may be said to have been necessary expenditure in the first instance, but arrangements should have been made to transfer some of the supplies at a later stage from places where they were not required to places where there was need of them. There remains a certain amount which was due to the irregular action of certain Executive Engineers and in one or two cases, it must be regretfully admitted, to positive dishonesty. This question is one which will be fully considered by the committee which has been appointed, as above mentioned, for the ensuing cold weather

The Public Works department was seriously handicapped in the punctual submission of accounts by the weakness of the staff available for their preparation in district and divisional offices. Useful temporary hands with the necessary

experience in accounts work are very difficult to find when they have to be enlisted quickly in large numbers to meet the emergencies of famine and a certain proportion of men so engaged are bound to be more or less incompetent. Moreover, the Examiner of Public Works Accounts, from whom the necessary additional accounts staff was expected, was only able, with help from other provinces, to provide nine accountants of whom seven were posted for inspection duty; one was posted to the Mirzapur famine division and one to the Gonda division to help with the additional audit work in the divisional office. The Examiner's arrangements in this respect were in striking contrast to those of the Accountant-General. Moreover the men were posted very late; one in January, three in February, one in March and two not till April. Help was asked from the offices of the Examiners of Public Works Accounts of Bombay, Bengal and Madras, but only the nine accountants above mentioned were obtained, and these did not all prove willing assistants, for some of them spent most of their time in endeavours to return to their own provinces. Besides accountants, 17 travelling auditors were appointed by the Examiner in accordance with paragraph 40 of the Famine Accounts Manual. These men were recruited partly from other Public Works department divisions and partly in the open market. Some of them proved most helpful, but a number were inefficient and had a very imperfect knowledge of accounts. The permanent divisional accounts staff did their best to keep their accounts up to date, but the work was too much for them and some regrettable delays occurred. The maintenance of an efficient reserve of accountants and clerks trained in accounts work in the Public Works department is a matter which requires careful investigation.

The total number of persons relieved, reduced to units supported for one day, was 97,044,668 and the maximum number on works at any one time was 901,570, the maximum number of charges open at one time being 181 in the middle of March. Of the workers 40 per cent. were men, 45 per cent. women and 15 per cent. children. The corresponding figures for 1896-97 are 32 per cent. men, 41 per cent. women and 27 per cent. children. The difference in the proportion of children is noticeable and is due largely to the fact that children between the ages of 7 and 10 were classed as workers in 1896-97 and as dependants in the present year.

From the table in the margin it will be seen that the proportion of dependants was very much higher in the recent famine than in 1896-97; in the former the dependants were 30 per cent. of the total

	Numbers relieved in—	
	1907-08.	1896-97.
Workers (men, women and children).	67,339,272	145,041,506
Dependants	29,705,396	34,703,442
Total ...	97,044,668	179,744,948

relieved and in the latter only 20 per cent. Of the dependants 95·4 per cent. were children, 3 per cent. were women and 1·6 per cent. men. As above mentioned children between the ages of 7 to 10 were classed as dependants in the present year, whereas in 1896-97 they were called workers, and this fact accounts for a large portion of the increase in the number of dependants in the present year; but another cause which was operative in the present year was the fact that the labouring classes, being better off and in a position to earn higher wages than ten years ago, frequently sent their children to the works to draw the dependant's wage and themselves earned better wages on ordinary works elsewhere. It is an impossible task when thousands are crowding in daily in search of relief to discriminate on works between those who are genuine dependants of workers and those who are not, and no effective method has as yet been devised to meet this difficulty. This was one of the reasons which led the Government early in the hot weather to discontinue the relief of dependants so far as possible, giving those who required it gratuitous relief at their homes.

An important feature of the relief of dependants on works was the system by which all those who showed signs of emaciation were fed at the headquarters' camp instead of receiving the dependant's wage. The parents or relatives of children thus treated were in most cases transferred to gangs at work at or near the headquarters' camp. The number of dependants thus fed for one day was 526,000, of whom 77 per cent. were children, the majority of the remainder being suckling mothers. The system had most satisfactory results in improving the condition of the dependants on the works, and avoided the undesirable and expensive form of relief in "kitchens."

Without taking any credit for the value of the work done, part of which will ultimately be debited to railways and canals, or for the amount which will be recovered by the sale of miscellaneous articles charged to contingencies, the gross cost per person relieved in 1907-08 works out to 22·4 pies as compared with 15·4 pies in 1896-97. This increase is chiefly due to the higher price of grain during the recent famine, as appears from the fact that the average daily wage of workers and dependants shows a rise of nearly 40 per cent. over the corresponding wages in 1896-97, being 18·3 and 6·5 pies respectively in the present year as against 13·3 and 4·5 pies in 1896-97.

It is impossible to make an accurate comparison of the expenditure on establishment in the recent famine and in 1896-97, as there has been some difference in the classification in the two years; but in both famines the expenditure is comparatively small owing to the fact that the works were carried out almost entirely by the existing staff of the Public Works department. The expenditure on works establishment, that

is on the pay of all those, apart from famine workers, employed on relief works is 6·7 per cent. of the total charges on works in the present year, while in 1896-97 it is not separately distinguished. The pay of the establishment other than that actually employed on relief works is only 1·5 per cent. of the charges on works in the present year as against nearly 3 per cent. in 1896-97, the difference being in part accounted for by the fact that the allowances of military officers were charged in the present year to the Civil department instead of to the Public Works department as in the previous famine.

The total amount of work done has been stated to be 1,386¼ million cubic feet of earthwork and 3,148,464 cubic feet of metal collection. If the metal collection work be reduced to the denomination of earthwork, the total work done in earthwork units is 1,418 millions of cubic feet against 1,680 millions in 1896-97. In the resolution on the famine of 1896-97 in considering the work done per diem by each group of workers, a group was taken as consisting of one digger and three carriers; this proportion of carriers is high, but for purposes of comparison the same group is taken for calculating the outturn in 1907-08. Excluding Sundays and non-working days about 60 million units working for one day turned out 1,418 million cubic feet of earthwork. So that each group did 94 cubic feet of earthwork per diem as against 52 cubic feet in 1896-97, which suggests that more effective means for the supervision of the work were adopted. The average wage of a group in 1896-97 was 4 annas 6 pies per diem, whereas in the recent famine it was 6 annas, so that the rate of wages paid for earthwork done in the two periods works out at 8 annas 8 pies per 100 cubic feet of earthwork in 1896-97 and at 6 annas 5 pies per 100 cubic feet in the present year. This shows that in spite of increased wages the cost of the actual work is considerably less.

Considering next the cost of the work as compared with normal rates, we find that including all charges the rate per 1,000 cubic feet is Rs. 8·9 in the present year as against Rs. 8·6 in 1896-97, while if only the expenditure on the workers being relieved as distinct from that on tools and plant, establishment and gratuitous relief on the works, be considered the rate is Rs. 6·18 in the present year as against Rs. 6·95 in the previous famine.

The rates for the different kinds of work are shown in the table given below. In working out this comparison the expenditure on tools and plant in the districts where no works were opened and the unadjusted liabilities, which are chiefly on account of tools and plant which have not been utilized on works, have been omitted.

Class of work.	Quantities.	Normal rates.	Cost at normal rates.	Famine rate.	Actual cost.	Comparison of rates.
	Cubic feet.	Rs. a. p.	Rs.	Rs.	Rs.	
Earthwork—		Per 1,000 c. ft.		Per 1,000 c. ft.		
	1,386,298,090	3 0 0 to 5 0 0	45,69,314	7·6 to 12	1,06,75,119	2½ to 1 to 2½ to 1
Metal collection—		Per 100 c. ft.				
Stone ...	70,988	2 0 0	1,420	24·7	18,269	12½ to 1
Kankar ...	3,077,476	2 0 0	61,549	8	2,46,898	4 to 1
Total ...	...	...	46,32,283	...	1,09,40,287	
Expenditure on tools and plant and miscellaneous expenditure in non-famine districts					3,08,883	
Known liabilities					1,12,901	
			Grand Total	...	1,13,62,071	

The high rate for stone metal collection is due to the fact that in some instances large preparations were made for quarry works, while the works were not open for long, and that during the rains a number of skeleton charges were, in accordance with the provisions of the Famine Code, kept open on quarries as a precaution with a considerable staff, though little work was actually done. The high rate for *kankar* serves to show that this form of work is not very suitable for famine relief owing to the amount of work which is wasted in preparing quarries for large gangs of labourers and the uncertainty in locating the metal which forms in pockets.

In the resolution on the famine of 1896-97 an all-round rate of Rs. 4 per 1,000 cubic feet was adopted as representing a fair normal rate, and on this basis it was calculated that the value of the work done in that year was 59 per cent. of the total expenditure on works. If the same basis of calculation be adopted the value of the work done on the present occasion amounts to 66 per cent. of the corresponding expenditure. But a fairer method of calculation would seem to be to take the normal rates for different kinds of work. If this is done the comparison of famine to normal rates is seen to be generally about 2½ to 1. The value of the work done would on this basis of calculation be 41 per cent. of the total expenditure, or if only the expenditure on wages to labourers, work establishment and tools and plant be considered, the value of the work done will be 51 per cent. of the actual cost. In executing ordinary works by daily labour there would be no expenditure on gratuitous relief and very little on shelter and miscellaneous contingencies.

Turning now to the question of the utility of the works constructed, it is only in connection with the roads and tanks that any doubt as to their utility can be raised. The utility of the other classes of work is obvious. As regards the roads, many are feeder roads to railways, and several will sooner or

later be metalled, and many of the tanks will be of great irrigational value. It would be a fair estimate to consider one-third of the earthwork on roads, one-half of the work on tanks and all the work of other kinds as work of undoubted utility, which would indicate nearly one-half of the work done as work of genuine use, equivalent to about 21⅓ lakhs of rupees (£142,000) worth of earthwork at normal rates. Excluding roads and tanks, the proportion of other forms of work done in 1896-97 was only 5·4 per cent., whereas in the present year it was 16·5 per cent.; so that there is no doubt that the province generally has derived much more benefit from the works executed during this period of scarcity than during the last. Moreover, the roads raised in the recent famine have been carefully chosen, and even if unmetalled will last longer than those constructed in 1896-97; for the latter were but slightly raised and in many cases have already worn down again almost to country level. Only 1,430 miles of road have been raised this year as against 3,274 miles in 1896-07; but the earthwork done per mile has been more than double (717,000 cubic feet per mile against 322,000 cubic feet).

In spite of the fact that some failures occurred in the administration of relief operations under the department, due in a great measure to the shorthandedness of the staff and a want of elasticity in the regulations, the Public Works staff, generally, has done its best to meet the stress of famine and on the whole the result of their exertions is creditable to the department, especially when it is remembered that with a few exceptions all officers had to undertake famine work in addition to their ordinary duties.

Foremost amongst those who deserve special mention is Mr. A. C. Verrieres, Executive Engineer of the Agra division, whose tact and methods of organization left nothing to be desired.

Others deserving of special mention are—

Mr. C. H. West	... Executive Engineer, Allahabad.
„ E. W. Clarke	... District Engineer, Mirzapur.
„ Chuttan Lal	... „ „ Bahraich.
„ V. G. Hyde-Smith	... Assistant Engineer, Belan canal work.
Conductor J. Sykes	... District Surveyor, Sitapur.
Babu Nathu Mal	... „ „ Bara Banki.
„ Parshadi Lal	... „ „ Kheri.
Mr. W. L. Wilkinson	... District Engineer, Allahabad.

The following are also mentioned as having done well:—

Pandit Badri Das	... District Engineer, Fyzabad.
Mr. H. S. Miller	... District Surveyor, Jaunpur.
„ F. A. Plomer	... „ „ Muttra.

Among the subordinates whose good work has been brought to notice are—

Babu Tara Chand	... Overseer, Gonda district.
Munshi Abdul Ghaffur Khan ..	... Sub-overseer, Bara Banki district.
Babu Munshi Ram	... Probationary Sub-overseer, Allahabad district.

The Lieutenant-Governor cannot speak too highly of the way in which the military officers on famine duty, without exception, performed the duties entrusted to them, often under the most trying climatic conditions. They remained in camp, often in tents, throughout the hot weather and always displayed the utmost tact and courtesy in their dealings with the officials and the people. The following officers worked with special distinction :—

Captain C. A. G. Shoubridge, 112th Infantry, in Bahraich;
" W. C. French, 2nd Battalion, 3rd Gurkhas, in Mirzapur;
Lieutenant G. N. G. Monck Mason, 84th Punjabis, in Sitapur;
" J. S. Richardson, R.E., in Jaunpur;
" H. F. W. Paterson, 32nd Pioneers, in Hardoi; and
" R. D. dela C. Corbett, 48th Pioneers, in Gonda.

Of the seven Assistant Superintendents of Police deputed on famine duty, specially good work was done by Mr. R. A. Horton in Gonda and Mr. B. G. P. Thomas in Allahabad.

In the course of famine operations great temptation naturally arises in the case of officials who are on comparatively low pay, and have necessarily to be entrusted with large sums of money. The instances of defalcation that occurred in connection with the operations of the Public Works department on the present occasion are happily few.

In the first circle only two petty cases came to light in which some muharrirs (writers) had failed to refund unpaid wages.

In the second circle one of the Temporary Engineers appointed in January 1908 was accused of accepting illegal gratification on account of some contracts for tools and plant. As noted above, he was convicted and sentenced to eighteen months' rigorous imprisonment. In the Gonda division two work agents absconded with Rs. 5,000 (£332) which the officer-in-charge had deputed them to bring from the nearest treasury. One of these defaulters was arrested and sentenced to twelve months' imprisonment, but the other (with most of the proceeds) is still at large. A cashier in Gonda was also sentenced to eighteen months' imprisonment for embezzling Rs. 850 (£56). Finally a sum of Rs. 3,725 (£248) was stolen in the Bahraich district in transit by *harkaras* (carriers), but was eventually recovered.

In the third circle two sums of Rs. 2,000 (£133) and Rs. 115 (£8) respectively were stolen in transit between sub-treasuries and the work. There was one case of defalcation on the part of an officer-in-charge in the Allahabad district and one or two instances of petty pilferings on the part of muharrirs and work agents, which were promptly dealt with.

One matter that has been made clear by the experience of this famine is that the superior engineering staff in charge of famine operations should be specially selected and that this process of selection should be carried out even at the risk of

the disturbance of the Public Works department organization that is involved by the transfer of specially competent men to famine charges, and of less competent ones from famine charges to ordinary charges. The importance of having the expensive works carried out by famine labour efficiently controlled and executed outweighs the inconvenience of such transfers, great though the latter undoubtedly is, and is justified by the large financial interests that are involved in the proper administration of famine relief. This will be readily understood if it is considered that the expenditure on famine relief in the Public Works department for the nine months of the late period of distress was 25 per cent. more than the average annual public works expenditure over the whole province, and that it was concentrated in less than half the total number of districts of the province. The Executive Engineers and District Engineers in famine-stricken divisions (particularly the latter) should be the best available, due regard of course being had to the more important ordinary works in progress at the time for which the services of well-qualified officers may also be requisite. When the stress is great it is further desirable to relieve these officers of their ordinary duties as far as possible especially in districts *(e.g.* Allahabad, Agra, Cawnpore) where they are heavy, and have equally to be carried out whether famine prevails or not.

CHAPTER X.

The relief measures carried out by civil officers.

Civil works.

49. The works under the management of the Public Works department continued to provide the greater portion of the relief given on works until the commencement of the hot weather. Arrangements were then made to convert the large charges into groups of smaller works. Some of these, as above described, continued to be managed and put in funds by the Public Works department, and except for the fact that dependants were not relieved on them, can be classed as small departmental works. They have been included in the returns of the Public Works department. In other cases, on the breaking up of the large public works, groups of works were formed, which were controlled and kept in funds by the Collector. These have been classed as civil works, although in almost all cases it was found convenient to retain the existing subordinate staff, so far as necessary, which had been working on the public works. A headquarters camp was formed for each group of works with an officer in charge, head muharrirs being in charge of the individual works. Apart from these, a large number of new works were started in the hot weather under the control of district officers. The management of these latter works was in some cases official and in some cases non-official; but in both cases the managers were required to follow so far as possible the rules laid down for the conduct of civil works under official management in the Famine Code, as it was realised that the rules prescribed for civil works under non-official management gave inadequate control and insufficient information to the district authorities.

In the Mirzapur district civil works formed from the commencement the backbone of relief in the upland areas and on these works dependants received relief until the hot weather. In the four districts of Jaunpur, Hardoi, Bara Banki and Muttra, as already mentioned, a special wage above Code rates was adopted, dependants not being transferred, as in other districts, to gratuitous relief. In the hill districts also a fixed wage above Code rates with no relief to dependants, was paid; elsewhere payments were made in accordance with the Code rules for civil works.

These works were in general both efficient and economical. In the 19 districts in which they were in operation they provided relief from the middle of May to the end of July for over 100,000 workers daily, the numbers in June rising to nearly 250,000. The number of units relieved for one day was 20,325,052 and the total cost was Rs. 22,50,370 (£150,025) giving

an incidence per unit relieved of 1 anna 9·2 pies, as against 1 anna 6 pies in 1896-97.

These civil works were of considerably more importance in the Mirzapur district, including the Family Domains of the Maharaja of Benares, and the Banda district than elsewhere, these two districts accounting for 667 and 270 works respectively out of the 1,549 works undertaken in the province. In these two districts and in some others the works consisted in many cases of field embankments, by which large areas of land have been made available for the sowing of spring crops and of rice; but the majority of works were village tanks, which in many cases have proved unexpectedly successful in tapping springs and will provide supplies both for irrigation and for watering cattle. In several districts sections of railway embankment, upon which public works had been engaged, were continued as civil works. Excluding the hill districts, where the works undertaken were for the most part irrigation channels, cart roads, bridle paths, forest enclosures, and tree guards, the amount of earthwork done was about 433 million cubic feet, which works out at a rate of Rs. 4-14-6 per 1,000 cubic feet, as against Rs. 4-10-5 in 1896-97. These results may be considered very satisfactory considering the higher price basis on which wages were calculated which in south Mirzapur attained the rate of 5 sers ($10\frac{5}{16}$ lbs.) to the rupee, and the fact that the majority of the works were undertaken in the hard, almost rocky, soils of Mirzapur and Bundelkhand.

Aided village works.

50. The use made of aided works at all periods of the recent famine was one of the important features of the operations. The general principle was that a sum of money was advanced by the Government to a landholder, who undertook the entire management of the work and agreed to repay at $6\frac{1}{4}$ per cent. interest a proportion of the loan, which was fixed at $\frac{1}{2}$ for the greater portion of the province and from $\frac{1}{3}$ to $\frac{1}{4}$ in Bundelkhand and Mirzapur. The manager, after receiving the first instalment of the loan, was at liberty to fix his own rates of wages, Government requiring merely that a certain quantity of earthwork should have been dug before the subsequent instalments were paid. The work was measured up at the close of operations and refunds exacted if there was any deficit in the amount of work done. The condition was enforced that no advance should be given for any work which had not been properly surveyed, and for which a proper plan and estimate had not been prepared. These works proved exceedingly popular and not less than 3,000 of them were undertaken in 35 districts. Throughout May and June over 100,000 workers were being relieved daily on them and at the beginning of June the number rose for a time to nearly 200,000. They were equally useful in providing additional employment in famine districts, especially in the

areas not reached by relief works, and in preventing the necessity of relief works in districts less seriously distressed; while their value in enlisting the co-operation of non-official gentlemen in the cause of relief was incalculable. The number of units for whom they provided relief, as shown by the weekly reports submitted by the managers, was 15,123,862; and this is probably less than the actual number of workers relieved as it was not easy in all cases to persuade the managers to be careful in submitting the returns. It does not moreover allow for the number of dependants and relations of these workers who were supported by the wages earned by the workers. The total amount advanced by Government was Rs. 18,47,531 (£123,169) and the incidence of cost per unit relieved is 1 anna 11·4 pies. Of the amount advanced by Government approximately 8¼ lakhs (£55,500) is repayable, and if this sum is deducted from the amount advanced the incidence of cost per unit relieved is reduced to 13 pies; so that from the point of view of Government the relief afforded by these works was most economical, while the managers themselves took care to select works, such as field embankments, irrigation tanks and similar projects, which will be of permanent utility to their land and will in most cases repay eventually the expenditure which they have themselves incurred. One or two of the works were of special importance, for instance the metalling of the Seohara-Tajpur road in Bijnor, for which Raja Shiam Sinha and his brother Kunwar Shiva Nath Sinha took an advance of Rs. 20,000 (£1,333); and the draining of the ponds round the town of Mahmudabad in the Sitapur district at similar expense—a work urgently required as a sanitary measure—which was undertaken by the Raja of Mahmudabad. Mention should also be made of the Raja of Singrauli in the Mirzapur district, who undertook more than 90 works. Several of the works which were not finished are of such intrinsic importance that their completion will be undertaken in the ensuing cold weather; and a further sum of about ½ lakh (£3,300) will probably have to be advanced for this purpose. It has been observed in many parts of the province, and especially in the Budaun and Bareilly districts, that the tanks undertaken as aided works have already given results beyond expectations. Springs of water were frequently found as the tanks were being dug and in many cases there has been actual irrigation for sugarcane while the work was going on; water also was provided for cattle where most wanted. It is not too much to hope that these satisfactory results will encourage landholders to take these advances to an even greater extent in future seasons of scarcity. The rates paid by the managers to the workers varied considerably, but were as a rule higher than the rates paid on Government works and approximated to the ordinary wages of labour prevailing in the vicinity. A digger usually received from two and a half

to three and a half annas a day, while carriers (mostly women) and children received less in proportion.

It is not easy to make an accurate estimate of the amount of work which was done, and in several cases masonry and road metalling work has to be allowed for, but the returns of work done show that about 473½ million cubic feet of earthwork was excavated, and the rate per 1,000 cubic feet works out approximately to Rs. 3-12-0. In this calculation the few works undertaken in the hill districts, which consisted principally of small irrigation channels, have been omitted. On some of these works higher rates ranging from 6 annas a day downwards were paid to the workers. The satisfactory nature of the supervision exercised by the managers of these works is indicated by the fact that although higher rates of wages were paid, the actual cost of completion of the works is more than one rupee per 1,000 cubic feet below the cost of the civil works.

Gratuitous relief.

51. The gratuitous relief given to poor persons at their homes in towns and in villages has in this famine assumed a greater importance than in previous famines. The proportion of persons thus relieved relatively to the total number relieved in all ways was 40 per cent. in the present year as compared with 26 per cent. in 1896-97. This result was in accordance with anticipations. The Hon'ble Mr. Miller, speaking in the Governor General's Council at the end of October 1907, after drawing attention, firstly, to the high range of prices which had prevailed for many months and had caused much hardship especially to the urban population, to the poorer members of the higher castes and to all classes on fixed incomes; and, secondly, to the great demand which there has been in recent times for labour and the great rise in wages—which forms the subject of a later paragraph of this resolution—said: "Taken together these two features of the situation seem to suggest that there may possibly be some change in the direction in which relief is most required, that it may not be necessary to provide on quite so large a scale for the unskilled labourer as in former seasons of drought, and that more attention may have to be given to those who are unfitted for such labour as our ordinary relief works will supply." Moreover the number gratuitously relieved in the recent famine was much increased by the addition of the dependants drafted at a much earlier stage than in previous famines for reasons already mentioned from relief works on the conversion of the latter at the commencement of the hot weather to civil works without relief to dependants. This fact vitiates any comparison of the number gratuitously relieved during the hot weather and rains in the present year and in 1897. In fact, the number relieved in the present year, which prior to the spring harvest had not exceeded 300,000 rose as high as 550,000 at the beginning of August, whereas in 1897 the maximum number recorded was 357,000. The

condition of the people has, however, rendered it possible to close gratuitous relief earlier in the present year, with the result that the total number of units gratuitously relieved in the present year 87,818,584 is not so much in excess of the total relieved in 1896-97, which was 76,601,544 as the maximum recorded at any one time would suggest.

The proportion of persons gratuitously relieved to the total population of the districts or portions of districts affected did not in the dry months except in rare instances exceed 3 per cent., which is the limit suggested by the Famine Code. The exceptions occurred in the Bahraich district where the proportion rose to 4 per cent., and in the southern portion of the Mirzapur district where the proportion was for some time not less than 10 per cent. The conditions, however, of this area are peculiar: paralysis and other diseases are very prevalent among a population consisting largely of aboriginal tribes, and augmented in the present year by a considerable influx of immigrants from the surrounding native states. It is probable that 10 per cent. would be a more suitable index number for this tract.

It is desirable at this point to refer to the conclusion arrived at by the Famine Commission of 1901 in paragraph 128 of their report, which was that for the whole period of the famine gratuitous relief (including the relief given to dependants on works) ought not to exceed the average proportion of 42 per cent., which it attained in the famine of 1896-97. On the present occasion the proportion has been 54 per cent. for the whole period of the famine, while if the period up to the end of May only be considered the proportion was 44·7 per cent. including, and 27 per cent. excluding dependants. It has to be considered that over a large area, where scarcity due to high prices prevailed, it was necessary to grant a moderate amount of gratuitous relief but not to give relief on public works, and in the rest of the affected area the need for gratuitous relief declared itself in most cases earlier than the need for employment. The number of dependants also was unusually large in the recent famine for reasons stated in the preceding chapter. Of the districts where relief works on a large scale were undertaken, the proportion of gratuitous relief (including dependants) was 34 per cent. of the total numbers relieved in the Jalaun district, 35 per cent. in the Bara Banki district and 45 per cent. in the Banda district. The only districts the returns from which call for comment are Allahabad and Kheri (50 per cent.), Bahraich (51 per cent.), Sitapur (53 per cent.), Gonda (64 per cent.) and Mirzapur (67 per cent.). In Allahabad the figure is explained by the fact that relief works were undertaken only in the three Bundelkhand tahsils, while gratuitous relief was given in all parts of the district; in Mirzapur the facts already stated about aboriginal tribes are a sufficient explanation; in the four remaining districts, all of which

lie in the usually well-to-do tract of North Oudh, the reason is that a large number of persons who had managed to hold out until the close of the hot weather came to the end of their resources just at the time when works were closing down by reason of the monsoon and the only form of relief possible for them until the ripening of the early autumn crops was gratuitous relief at their homes.

Of all forms of relief gratuitous relief is undoubtedly the most difficult to control; but the Famine Commissioner lost no opportunity of checking it by comparison between districts, wherever the numbers suggested either insufficiency or excess, the former being often as great an anxiety as the latter. The total cost of gratuitous relief in the present year has been Rs. 54,37,273 (£362,485) and the cost per unit relieved works out at 11·9 pies, which although considerably higher than the incidence shown in 1896-97, namely 8·9 pies, cannot be considered excessive in view of the higher range of prices in the present year, which necessitated a higher price basis for the calculation of the Government dole. It is in fact much lower than the incidence recorded in Bombay in the famine of 1899-1900, which was 1 anna 1 pie: and in that famine the average incidence for all the provinces affected was 11 pies.

Gratuitous relief was extended in the present year to a large number of chaukidars (village watchmen) whose small pay was insufficient for the support of themselves and their families in consequence of the high price of food. This relief made it unnecessary for them to resort to relief works and enabled them to remain in their villages, look out for wanderers and guard the property of absentees. District officers were also permitted to extend the same relief to patwaris (village accountants) and their families, if necessary; but very few of the latter were willing to accept relief in this form. The Lieutenant-Governor gratefully acknowledges the valuable assistance rendered by non-official agency, by which the distribution of gratuitous relief was almost universally made and for which district officers make generous thanks.

One conclusion seems to follow from the experience of the present year, namely that the distinction between scarcity and famine admits of better definition than is at present given in the Famine Code. General opinion seems in favour of defining famine districts to be those districts in which relief works with relief to dependants are needed, and scarcity districts as those in which gratuitous relief and aided works without relief works afford all the aid to distress that is necessary.

Poorhouses.

52. Attention has been already drawn to the small amount of poorhouse relief which was required in the recent famine. The experience of other famines had not indicated that this would be the case, and misled by this and by the instructions in the Famine

Code, which are to the effect that ordinarily one poorhouse for each tahsil will suffice, district officers in the autumn, before the results of the distribution of agricultural advances became apparent, had already provided for the erection of many more poorhouses than were needed. Of the 96 poorhouses which were built, 6 were in fact never opened. Poorhouses were used in 28 districts, but in some cases the numbers relieved in them were small and many of the poorhouses were closed at the time of the spring harvest or soon after. The greatest number relieved at any one time in the province was little more than 6,000, as compared with 58,000 in 1897: and in the Bahraich and Gonda districts, where the need was greatest, the numbers in Government poorhouses did not at any time exceed 1,000, whereas more than 11,000 were relieved at one time in 1897 in the poorhouses of the Allahabad district. The absence of serious distress in the neighbouring native states was one reason for the smallness of the numbers in the present year, but there is no doubt that the liberality with which gratuitous relief was given was also a contributory cause. Poorhouses are an invaluable test of the amount of wandering and of the sufficiency of gratuitous relief. The attendance proves how well the latter was kept in advance of pressure in the recent famine. At the same time, in estimating the value of the poorhouses, allowance should be made for the fact that the number of inmates was constantly reduced everywhere by drafting from them to relief works those who could work, or to gratuitous relief those who had homes at which they could be relieved. The poorhouses were therefore valuable as temporary rest-houses for such people. Those who remained were the derelicts of the population, the homeless cripples and invalids. As charitable institutions for the relief of such persons the poorhouses were unquestionably of great benefit, providing a refuge for all such as were unable by reason of their infirmities to do any work and for many weak and diseased persons who disliked to go into hospital. The poorhouses were under constant medical supervision and were regularly visited and inspected by magistrates, famine officials, sanitary officers and private gentlemen. The scale of diet prescribed by the Famine Code was discovered early in the year to be insufficient; a revised and more liberal scale was therefore prepared under medical advice. The revised scale provided for a special milk and spoon diet for children and invalids, and discretion was left to the medical officer to prescribe an individual ration for special persons as seemed necessary. The scale of diet for the hospital, attached to each poorhouse, was laid down by the district medical officer with the approval of the Collector.

The total number of persons relieved for one day in poorhouses was 797,022. The total cost, including the cost of construction and the pay of the staff, was Rs. 2,03,760 (£13,584);

giving the high incidence of four annas one pie per unit relieved. If, however, the cost of diet only be considered the cost per unit relieved is reduced to 1 anna 8·9 pies. Apart from the high cost of construction, the incidence per unit relieved in poorhouses must inevitably be high when the numbers are small, as these places are really infirmaries and might be so called, requiring a trained medical staff with a large number of subordinates, such as cooks, &c., to look after the sick and maintain careful sanitary conditions among a class particularly susceptible to epidemic disease. A proportion of the cost of the poorhouses situated in municipalities, with the exception of Lucknow and Khairabad, was borne by municipal revenues, the proportion being fixed at one-half save in a few cases, where for special reasons Government contributed a larger share. The Lieutenant-Governor gratefully acknowledges the assistance which was rendered by non-official gentlemen in the supervision and inspection of poorhouses. This was particularly noticeable in the Bara Banki district where all the poorhouses had honorary superintendents.

Orphanages.

53. It was not found necessary to construct special orphanages in the recent famine except in pargana Dudhi in the Mirzapur district, and poorhouses, where they existed, provided the necessary accommodation. The number of destitute children whose support had to be undertaken by the district authorities was remarkably small, and it is probable that not more than one hundred orphans will remain at the disposal of Government, whereas at the close of famine operations in 1897, more than 1,600 orphans had to be provided for. This satisfactory result is due to the liberality with which gratuitous relief was given and to the absence of any general wandering, as evidenced by the small number of persons who took refuge in poorhouses. At an early period of the famine Government impressed upon district officers their responsibility for the care of orphans, and laid down the general principle that district officers should assume the charge of any destitute children who came into their hands and, failing the discovery of their relatives, should maintain these children in their districts in poorhouses or state orphanages until the close of famine operations. This procedure was dictated by the hope that in this way every opportunity would be given to the relatives of the children to reclaim them. At the same time district officers were instructed not to interfere with the efforts of benevolent persons who might desire to assist in the charge of destitute children, other than those who had already been taken charge of by the district authorities. Considerable activity was shown in pursuit of this object, notably by the Arya Samaj in Bundelkhand and North Oudh. The Lieutenant-Governor is assured that the accommodation provided for orphans in the famine poorhouses was in general superior to that

which they would have had in their own homes. The children were invariably kept on the women's side of the poorhouse in charge of some woman resident and in some cases in a separate part of the enclosure. Every effort is now being made to discover the relatives of the small number of children who remain unprovided for, and it is hoped that the greater number of these children will be adopted by their relatives or caste-fellows. Failing this, arrangements will be made by Government for the support of the children at some recognized orphanage, and an allowance for their maintenance will be made from the Famine Orphans Fund of which the Chief Secretary to Government is the Administrator. This Fund was formed from charitable money for the support of the orphans remaining over after the famine of 1896-97 and still provides a monthly allowance for over 300 of those children.

Relief given through the police.

54. As previously mentioned, all officers in charge of police stations were provided at an early stage of the proceedings with money to relieve any casual wanderers and send them to the nearest poorhouse or relief work. The sums actually expended on this object were comparatively small, owing to the absence of wandering on a large scale. Use was made of the money in 30 districts, 20,927 persons receiving relief at the hands of the police at a cost of Rs. 1,690 (£112), that is at a rate of one anna 3·5 pies per unit relieved.

Relief to weavers.

55. Although special relief for the weaving community is recognized as necessary by the Famine Code, no relief on any extensive scale has been administered in this province in previous famines, and there is no certainty as to the best and most economical means of giving assistance. Towards the end of January it was feared that by reason of the scarcity and high prices in several districts it was becoming difficult for weavers to find a market for their manufactured goods; experimental rules were therefore drafted by which relief could be administered in two different ways, and it was left to the discretion of district officers to decide which plan they would adopt. In the one case the weavers were to be supplied with yarn at cost price, or at less than cost price according to a sliding scale if the selling price of their goods in the nearest market fell by an anna or more in the rupee below the ordinary price prevailing in normal times, and were to find their own market for their goods. In the other case the yarn was always to be supplied at cost price, and the manufactured goods were to be purchased at normal prices by the aid of non-official assessors. Non-official committees, representative of the leaders of the weaving community and of the merchants to whom the weavers dispose of their manufactured goods, were to be employed in both cases to purchase and supply the yarn, and in the second case also to value the goods manufactured. The first issue of yarn was, if necessary, to be made on credit and its value might

be remitted as a valedictory dole when operations were finally closed.

Relief was in fact given to weavers in eleven districts and both the plans suggested were in several districts found to be perfectly workable; but in more than one district the weavers were unwilling to accept either of these plans for fear of losing their connection with the persons who usually finance them. It was therefore found preferable simply to make advances at Rs. 7 or Rs. 8 per loom; the advances were given principally in the Hardoi and Sitapur districts and aggregated over half a lakh of rupees (£3,300). Several variations of the original schemes were worked out in other districts. Relief was given on the most considerable scale in the Bara Banki and Jhansi districts, and also to some extent in Benares, Agra, Bijnor, Fatehpur, Jaunpur, Fyzabad and Gonda, at a cost to Government of less than Rs. 22,000 (£1,450). Several thousand weavers and their families were assisted in this way; but the experience of the year seems to show that relief to weavers on a large scale is never likely to be required in this province as the weaver is generally an agriculturist who fills up his spare time with weaving and can thus be employed on ordinary relief. Non-official assistance was of much value in administering this relief; the Reverend H. Forman in Jhansi, the Reverend C. H. Mattison in Fatehpur and Kunwar Shiva Nath Sinha in Bijnor undertook entire charge of the operations in those districts.

Relief measures undertaken in estates under the Court of Wards.

56. The straitened circumstances of most of the estates under the Court of Wards owing to the failure of the rent collections in the autumn necessitated a considerable curtailment of their programmes for improvements. So far as possible works which were calculated to give employment to agricultural tenants were allowed to stand, while a certain number of the wealthier estates undertook special works, such as the construction of roads and tanks, to afford direct relief. Rs. 4,345 (£290) was allotted for this purpose by the Ausanganj estate and Rs. 7,207 (£480) by the Bhadawar estate in the Agra district, which also undertook the support of all persons requiring gratuitous relief in the estate. Smaller sums were spent in other districts. Advances for private aided works were taken by estates under the Court of Wards in the Mirzapur, Gonda, Allahabad and Jaunpur districts, amounting in all to Rs. 2,10,619 (£8,425). The principal works constructed with these advances were embankments for purposes of irrigation, for which loans to the amount of Rs. 1,63,861 (£10,924) were taken in the Mirzapur district, Rs. 11,000 (£733) in the Jaunpur district, and Rs. 10,000 (£667) by the Bara estate in the Allahabad district. In Gonda the money borrowed was mainly spent in excavating tanks. In the Bara Banki district loans to the amount of Rs. 17,367 (£1,158) were taken from Government for the construction of masonry wells.

The advances made by estates under the Court of Wards to their tenants are mentioned in a later paragraph of this resolution. Subscriptions also to the amount of Rs. 30,544 (£2,036) were made by solvent estates to the Famine Relief Fund.

CHAPTER XI.

Charitable relief. The services of non-officials.

57. The amount of charitable relief administered by the aid of subscriptions and contributions made by private persons was very large. On the 25th January the Lieutenant-Governor presided over a public meeting held at Lucknow, at which it was resolved to form a Famine Charitable Relief Fund for the United Provinces, with the Lieutenant-Governor as President and Chief Justice Sir John Stanley, K.C., as Chairman. A representative general committee for the United Provinces and two branch executive committees, one for Agra and one for Oudh, were formed for the purpose of administering the resources of the fund, and subscriptions were invited from the public. The two provincial committees worked entirely through local committees which were formed in all districts in connection with them. Where relief committees were already in existence, as was the case in several districts, these were affiliated to the provincial committees. The central committee received in all nearly 9½ lakhs (£63,300), including munificent gifts of Rs. 1,50,000 (£10,000) direct from the Indian People's Trust Fund, and Rs. 7,05,000 (£47,000) from the Central Committee of the Indian Famine Charitable Relief Fund, Calcutta, the money at the disposal of the latter having been augmented by the available balance of the Indian People's Trust Fund. The money was divided in approximately equal shares between the provincial committees, and apportioned by them to the local committees. Including subscriptions received by the provincial committees and by the local committees themselves, the money available for distribution amounted to about 8 lakhs (£53,000) in Agra and 6½ lakhs (£43,300) in Oudh, the subscriptions collected in the province by the various committees exceeding 5¾ lakhs of rupees (£38,000). In the famine of 1896-97 the subscriptions collected in the province amounted only to 4¾ lakhs (£31,600), whereas the help received from outside the province was 46¾ lakhs (£311,600) as compared with about 8½ lakhs (£57,000) in the present year. The Lieutenant-Governor desires to express his appreciation of the cordial response which was made throughout the province to his appeal for subscriptions and his gratitude to the Central Committee of the Indian Charitable Relief Fund at Calcutta for the assistance received from it. A gift in the shape of blankets to the value of Rs. 3,000 (£200) was received from the Cawnpore Woollen Mills and a number of cases of Mellins' food from the Mellins Food Company.

The objects for which the money was allotted were those detailed in chapter XVII of the United Provinces Famine Code. The distribution of blankets and clothing was the form of relief which was first started in most districts. As the weather became warmer the supply of blankets was discontinued, though clothing was distributed throughout the famine in the more severely distressed districts. Doles of money were given to the old and infirm and to children, and medical comforts were supplied to those specially needing them in poorhouses and on relief works. In some districts raw materials were supplied to weavers, from whom the finished articles were afterwards purchased. A number of cheap grain shops were started, which appear to have been more successful in the urban than in the rural areas. Special grants-in-aid were made to charitable institutions of all denominations and to orphanages; but it was not considered necessary to reserve any of the money for the maintenance of orphans after the famine, as responsibility for these was accepted by the administrators of the Famine Orphans' Fund. Far the larger portion, however, of the money subscribed was reserved for distribution on the break of the rains to cultivators for the purchase of seed and cattle and for subsistence until the ripening of the autumn crop. In Agra the districts of Mirzapur, Banda and Jalaun received the largest allotments, and in Oudh nearly 4 lakhs (£26,600) was divided between the six most distressed districts for this object, Bahraich, Gonda and Kheri between them receiving over 3 lakhs (£20,000). In addition to the abovementioned sums Rs. 75,000 (£5,000), which was received from the Indian Famine Charitable Relief Fund, Calcutta, at the end of August, was allotted to the distressed districts of North Oudh, Bahraich receiving Rs. 45,000 (£3,000) and a further sum of Rs. 20,000 (£1,333) was transferred from the Agra Branch committee to the Oudh committee for allotment to the Bahraich district. Final figures are not as yet available of the exact amount expended under the various heads and the actual distribution is still proceeding in some districts; but the following amounts are known to have been expended up to the end of August on the four main objects detailed in paragraph 215 of the United Provinces Famine Code: on object I, Rs. 2,25,000 (£15,000); on object II, Rs. 2,000 (£133); on object III, Rs. 1,65,000 (£11,000), and on object IV, Rs. 8,75,000 (£58,300). A separate report of the operations of the Fund with audited accounts will shortly be published.

The Lieutenant-Governor desires to express his gratitude to Sir John Stanley for his valuable services as Chairman of the Fund and of the Agra Branch Committee, and to Mr. E. M. DesChamps Chanier, Judicial Commissioner of Oudh, who acted as Chairman of the Oudh Branch Committee. His acknowledgments are also due to Mr. W. J. D. Burkitt, I.C.S. and Mr. A. P. Charles, I.C.S., who did excellent work as

Honorary Secretaries of the Agra and Oudh Branch Committees respectively. The Lieutenant-Governor desires also to record his special thanks to the following gentlemen who subscribed sums of Rs. 10,000 (£666) and over to the Charitable Fund. In Agra His Highness the Nawab of Rampur, Rs. 20,000, and His Highness the Maharaja of Benares, Rs. 15,000 to the Central Committee and Rs. 4,000 to the Benares district committee; in Oudh, His Highness Raja Sir Jagatjit Singh Bahadur, K.C.S.I., of Kapurthala, Maharaja Sir Bhagwati Prasad Singh, K.C.I.E., of Balrampur and the Trustees of the Husainabad Endowment, Rs. 10,000 each. The following gentlemen also subscribed sums of Rs. 1,000 and over to the Central Committee or the Agra local committees. The Honourable Nawab Muhammad Faiyaz Ali Khan of Pahasu, Raja Balwant Singh of Awah, Rai Sahu Lalta Prasad Bahadur of Pilibhit, and David Yule, Esq., of Calcutta, Rs. 5,000 each; His Highness Sir Kirti Sah of Tehri, Rs. 4,000; Lala Bishambhar Nath of Cawnpore, Rs. 3,500; the Honourable Mr. A. McRobert of Cawnpore, Rs. 3,000; Raja Brij Narain Rai of Padrauna, Rs. 3,000 to the Central Committee and Rs. 3,000 to the district committee of Gorakhpur; Babu Gopi Narain Sahib of Cawnpore, Rs. 3,000; Raja Indarjit Partab Bahadur Sahi of Tamkohi, Rs. 2,640; His Highness the Maharaja of Dumraon, Rs. 2,500; Nawab Muhammad Abdussamad Khan of Chatari, the Raja of Rampura, Jalaun district, the Honourable Pandit Sundar Lal, C.I.E., Khan Bahadur M. Muzammilullah Khan of Aligarh, Lala Ramanuj Diyal and Sheikh Wahi-ud-din of Meerut, Babu Moti Chand of Benares and the Raja of Salemgarh, Gorakhpur district, Rs. 2,000 each; Sir John Thursby, Bart., of Ormerod house, Burnley, Lancashire; Kunwar Ragho Prasad Singh of Baraon, Allahabad district; Lala Ram Chandra Sarupa of Meerut, and the Ausanganj Estate, Ghazipur, Rs. 1,500 each; the Hon'ble Munshi Madho Lal of Benares, Rs. 1,250; Sheikh Manzur Ahmad of Dhundri, Rs. 1,200; Raja Krishna Kumar Rs. 1,400; the Raja of Nahan, Dehra Dun and Kazi Zakir-ud-din Rs. 1,100; Mr. and Mrs. D. King of Calcutta, Mr. Courtenay Wright and Messrs. Wallace and Company, Bombay, the Honourable Sir John Stanley, K.C., the Honourable Mr. Justice Aikman, the Raja of Manda, Rai Ram Charan Das Bahadur, Kunwar Obidullah Khan of Dharampur, Messrs. Begg, Sutherland and Company, Cawnpore, the "Pioneer" Press, Allahabad, Raja Shiam Sinha and Kunwar Shiva Nath Sinha of Tajpur, Kunwar Bharat Singh of Sahanpur, Bijnor; Lala Dalip Singh of Meerut, Rai Bahadur Nathi Mal and Rai Bahadur Amolak Ram, Chaudhri Ram Sarup, Kunwar Tej Pal Singh, and Rao Girraj Singh of Bulandshahr, Raja Dat Parshad Singh of Mursan, Seth Chunni Lal of Agra, Mahant Kirpalban of Salempur, Moradabad, the Elgin Mills Company, Cawnpore, the Cotton Mills Company, Cawnpore, Seth Bihari Lal of Mirzapur, the Raja of Majhauli,

Gorakhpur district, the Raja of Bansi, Basti district, Munshi Rahimdad Khan of Bareilly, and Babu Harak Chand of Azamgarh, Rs. 1,000 each.

Subscriptions of Rs. 1,000 and over were sent to the Oudh local committees by the Nanpara Estate, Rs. 5,622; Raja Sir Muhammad Tasadduk Rasul Khan, K.C.S.I., of Jehangirabad, the Secretary, Shah Najaf, "King's side," and the Secretary, Shah Najaf "Queen's side," Rs. 5,000 each; Rana Sheoraj Singh of Khajurgaon, Rs. 3,000; Kunwar Rukmangad Singh of Hardoi, Rs. 3,000; the Honourable Raja Muhammad Ali Muhammad Khan, Khan Bahadur, taluqdar of Mahmudabad, Rs. 2,000, the Payagpur Estate, Rs. 2,000, the Tiloi Estate, Rs. 1,200, Mirza Muhammad Ali Beg, taluqdar of Aurangabad Rs. 1,050; E. J. R. Dyer, Esq., Lucknow; Sheikh Naushad Ali Khan, taluqdar of Mailaraiganj, Bara Banki; Seth Raghubar Dayal of Kotra, Sitapur; the Sissaindi Estate, Lucknow; A. W. Trethewy, Esq., I.C.S., Deputy Commissioner, Fyzabad, and Raja Bhagwan Bakhsh Singh of Amethi, Rs. 1,000 each.

In addition to the operations of the Charitable Relief Fund much was done by non-official gentlemen to relieve distress. Reference has already been made to the generous action of the Maharaja of Balrampur in undertaking almost the whole cost of famine operations on his large estates in Gonda and other districts. A large number of other gentlemen followed his example in constructing unaided works at their own cost. The works were principally field embankments, tanks and buildings and were a valuable supplement to the works undertaken by Government. Several private poorhouses were opened and numbers of charitably disposed persons gave gifts of money and clothing to the poor. In addition to this in practically all districts and especially in the large towns, the leading men gave the greatest assistance to Government in the preparation of the lists and the distribution of gratuitous relief, in the selection of suitable recipients for Government advances, in the management of aided and in many cases civil works, in the inspection of poorhouses and in many other ways.

Where so many persons distinguished themselves, it is not easy to make a selection and it is impossible to include the names of all those to whom the Lieutenant-Governor desires to express his thanks. Special recognition, however, is due to the services of those whose names are here given: in the Gonda district the Maharaja of Balrampur, Hayati Malik of Itai Rampur and Rani Hansraj Kunwar of Majhgawan; in the Bahraich district Lala Shambhu Nath, Saiyid Aulad Husain and Mr. A. R. Wood, manager of the Kapurthala Estate; in the Bara Banki district Raja Sir Tasadduk Rasul Khan, K.C.S.I., of Jahangirabad; Rai Mahadeo Bali of Daryabad and Babu Jiwan Ram, vice-chairman of the Municipal Board; in the Fyzabad district Thakurain Sri Ram Kunwar of Khapradih; in the Sultanpur district the Raja of Kurwar; in the Lucknow district Raja Shaban Ali Khan of Salempur;

Pandit Suraj Narain and the municipal members who distributed relief in the city; in the Sitapur district the Hon'ble Raja of Mahmudabad, Thakur Rameshwar Bakhsh Singh of Parsehri, Chaudhri Ganga Bakhsh of Biswan, M. Abdul Kadir, Lala Shankar Sahai of Khairabad, Munshi Saiyid Ahmad of Amirpur and Thakur Jagannath Singh of Patabojh; in the Hardoi district Raja Rukmangad Singh of Katiari, Thakurain Deo Kuar of Bharawan, Thakur Maharaj Singh of Hathwa and Thakur Nirmal Singh of Raigaon; in the Kheri district the Rani of Khairigarh, Khan Bahadur Khalil-ullah Khan, the Rani of Bijua, Sirdar Jogendra Singh, Thakur Rajendra Bahadur Singh and S. Tasadduk Husain of Aurangabad; in the Benares district M. Kanhaiya Lal and M. Rabinandan Pershad; in the Mirzapur district His Highness the Maharaja of Benares, Raja Rudra Partab Singh of Singrauli and Pandit Sri Nawaz Pande of Ahraura; in the Jaunpur district Khan Bahadur Ali Jan and Khan Sahib Mufti Haidar Husain; in the Ghazipur district Pandit Sadanand Pande; in the Ballia district Maharaja Munindra Chandra Nandy of Kasimbazar, B. Bali Ram Singh of Siar and B. Sachida Nand Singh; in the Allahabad district Raja Ram Partab Singh of Manda, Lal Drig Bijai Singh of Daiya, Thakur Ragho Parshad Narain Singh of Baraon, Thakur Jaswant Singh of Shahpur and B. Charu Chandar Mittra; in the Fatehpur district Kunwar Chandra Bhukan Singh and Rai Bahadur Lala Ishwar Sahai; in the Cawnpore district B. Vikramajit Singh; in the Jalaun district Raja Ram Singh of Rampura, Lala Bishambhar Nath (also in Cawnpore), K. Manmohan Singh of Bangra and K. Makund Singh of Magrol; in the Jhansi district B. Jado Nath Chaudhri, Mir Jafar Husain and Rai Sahib Pandit Krishna Rao; in the Hamirpur district Thakur Sobha Singh of Kulpahar; in the Banda district B. Shiva Parshad; in the Agra district Saiyid Ali Nabi, M. Mazhar Husain and and M. Shabbar Husain; in the Muttra district Thakur Kehri Singh of Chandwara; in the Etawah district Rai Sahib Pathak Sheo Sahai and Raja Parbal Partab Singh of Malhajini; in the Bareilly district Ram Kishan Lal; in the Shahjahanpur district Lala Kunj Behari Lal; in the Budaun district Rani Chandeli Kuwar of Bahroli; in the Bijnor district Raja Shiam Sinha of Tajpur, Kunwar Shiva Nath Sinha of Tajpur, Mufti Ibrahim Husain of Kiratpur and Soti Harbans Lal of Bijnor; in the Garhwal district Narain Dat, contractor of Ramnagar and in the Dehra Dun district Nain Singh Siana of Thalin and Mahant Lachman Das of Dehra. The services of the following ladies were most useful in administering relief to *parda-nashin* women: in Agra Miss Bland of the C. M. S. Mission and Miss Eckhart of the Baptist Mission and in Sultanpur Miss Owston of the Sultanpur Mission.

Before concluding the subject of charitable relief it should be mentioned that a number of volunteers working under the direction of the Arya Samaj were engaged at various times

in administering relief in a number of the distressed districts from subscriptions raised for this purpose. The relief given consisted for the most part of doles of money or gifts of clothes to persons not in receipt of relief from Government. A certain number of orphans also were collected, and orphanages were established for their maintenance at Banda and Gonda. There is no doubt that some of these volunteers did good work, particularly Pandit Gopal Krishna Devadhar and others in Mirzapur, where they were willing to work in co-operation with the district authorities, remaining at their posts with commendable enthusiasm throughout the severe epidemic of cholera in that district. An average of about 3,000 persons daily were given help in various ways by these volunteers in Mirzapur during the three months from July to September, and about Rs. 11,000 was spent. But as the majority of those engaged in this work were strangers to the locality in which they were employed, it could not have been easy for them to acquire the necessary local knowledge of the most suitable cases for relief: and money was sometimes given away with too little discrimination.

CHAPTER XII.

Indirect measures of relief by Government. Remissions and suspensions of land revenue and rent. Agricultural advances.

58. A connected account may now be given of the measures of indirect relief which have been already referred to in paragraph 25 as among the earliest and most important of the measures adopted by the Government. Instructions were issued to all district officers that, as soon as the extent of the failure of the crops could be ascertained, they should estimate the amount of land revenue payable on account of the autumn harvest which would require to be suspended or remitted. These estimates were checked and passed by the Government as early as possible: the landlords were thus informed at once of their liabilities as regards the payment of land revenue and of their obligations as regards the deferment of their rent-collections. In Agra relief in rent to double the amount of revenue suspended or remitted automatically follows the suspension or remission of Government revenue, and although there is no similar rule in Oudh, relief in revenue is there given on the understanding that corresponding relief will reach the tenant. The scale of relief adopted outside Bundelkhand was, in accordance with the standing rules, the suspension of 4 annas in the rupee of the land revenue when the loss of the autumn harvest exceeded 8 annas, but did not exceed 10 annas, of 8 annas where the loss exceeded 10 annas but did not exceed 12 annas, and total suspension where the loss exceeded 12 annas: no relief ordinarily was given where half of a normal crop had been obtained. Immediate remissions were not as a rule given in any case where a fair area was known to have been sown with spring crops, as the amount eventually to be remitted must depend upon the success or failure of the spring harvest. Immediate remissions were only given in certain cases where the area sown with spring crops was known to be small or where the circumstances for some reason demanded special treatment. This was the case throughout Bundelkhand. In that tract it is usual to grant a preliminary postponement of revenue where relief is required, but in the present season the area which could be sown with spring crops was so small that its outturn could not be sufficient to recoup materially the losses of the autumn. The specially liberal scale, which has been accepted in recent years for remissions in Bundelkhand, was employed in all cases except in a small and exceptional tract in the Meja tahsil of the Allahabad district. This scale allows a remission of 4 annas in the rupee, where the loss of the

harvest amounts to 6 annas but is less than 8 annas, a remission of 6 annas where the loss amounts to 8 annas, but is less than 10 annas, of 8 annas where the loss amounts to 10 annas but is less than 12 annas, of 10 annas where the loss amounts to 12 annas and total remission where the loss exceeds 12 annas. The immediate remissions made in Bundelkhand amounted to nearly 13¼ lakhs (£88,330), being 77 per cent. of the total revenue payable on account of the autumn harvest. The total amount of land revenue suspended or remitted in the province on account of the failure of the crops in the autumn was Rs. 1,14,81,718 (£765,448) being slightly more than 36 per cent. of the total revenue demand for that harvest. Of this sum Rs. 48,15,194 (£3,21,013) was remitted either at once or later, and Rs. 66,66,524 (£444,435) was suspended.

The same principles were followed in granting suspensions or remissions of revenue on account of the spring harvest, except that it was possible in most cases to decide at once whether relief should take the form of suspension or of remission, the loss in both harvests being known. The total amount of land revenue suspended or remitted on account of the failure of the spring crops was Rs. 53,28,820 (£355,255), being 16 per cent. of the land revenue demand for that harvest. Of this sum Rs. 29,44,432 (£196,295) took the form of immediate remissions, 13¾ lakhs (£91,600) or 69 per cent. of the land revenue being remitted in Bundelkhand. The direct loss to Government therefore by reason of the remission of land revenue on account of both harvests amounted to over 77½ lakhs (£516,500). In addition the collection of 90½ lakhs (£603,500) has been suspended.

59. In the estates under the Court of Wards, in addition to the remission and suspension of rent, the *siwai* income (that is, the income obtained otherwise than from agriculture) was in many cases given up to the tenants. In several estates, for instance in the Mirzapur district, the *mahua* crop was made over to the tenants for food, and elsewhere the produce of the mango groves or tanks was given them free of charge. The revised estimates of realisations on account of rent and *siwai* show a falling off by Rs. 29,73,044 (£198,203) as compared with the original estimated receipts. This figure indicates the amount of rent remitted or suspended and the value of the *siwai* income made over to the tenants, as above described. It is not, however, possible to state at present the amount of the rental demand which will be remitted or subsequently collected. In addition to the above no attempt was made to realise arrears of rent amounting to Rs. 1,63,550 (£10,903) and debts, mainly due on decrees obtained against tenants, amounting to Rs. 2,17,819 (£14,521). Advances aggregating Rs. 1,08,584 (£7,239) made in the previous year were also allowed to stand over.

In estates where Government was itself the landlord remissions and suspensions of rent were made, where necessary. For instance, in the Garhwal Bhabar estates Rs. 1,299 (£87) and in the Tarai and Bhabar estates Rs. 28,744 (£1,916) was remitted in the autumn.

60. The second measure of moral strategy on which Lord MacDonnell's commission insisted was the timely distribution of advances under the Agriculturists' Loans Act and the Land Improvements Act. In the last week of September, when the hope of rain to save the autumn crop could no longer be entertained, a conference of officers present in Naini Tal was assembled under the presidency of the Lieutenant-Governor to discuss the situation. Among other things it was resolved to advance money on a large scale to assist the sowings for the spring harvest, and to provide irrigation for the growing crop. Shortly afterwards the subject of the extension of irrigation by means of masonry wells was taken up, and district officers were urged to stimulate the construction of such wells by the offer of advances. Later on loans were given in a few districts for the sowing and watering of sugarcane. When the season of sowings for the autumn harvest came round, liberal advances were again made both for seed and cattle : and in the course of the year considerable sums were advanced also for fodder, for the construction of embankments and irrigation channels and for subsistence in the Kumaun division.

The total amounts distributed for each specific purpose are as follows :—

		Rs.	
1.	*For the spring harvest—*		
	(a) Seed	96,26,471	(£641,765)
	(b) Cattle	3,71,296	(£24,753)
	(c) Temporary wells	20,79,154	(£138,610)
	(d) Well gear	6,54,610	(£43,641)
	(e) Miscellaneous	24,401	(£1,626)
2.	*For the autumn harvest—*		
	(a) Seed	47,17,356	(£314,490)
	(b) Cattle	29,93,278	(£199,552)
	(c) Miscellaneous	80,727	(£5,382)
3.	Fodder	1,46,739	(£9,782)
4.	Sugarcane	1,30,826	(£8,722)
5.	Advances to Co-operative Societies ...	3,69,715	(£24,648)
6.	*Advances for subsistence—*		
	(a) in Kumaun	6,31,695	(£42,113)
	(b) Other loans such as to Gursarai estate in Jhansi ...	9,960	(£664)
7.	*Improvements—*		
	(a) Masonry wells	49,06,973	(£327,131)
	(b) Embankments and irrigation channels	3,98,831	(£26,589)
	(c) Repairs and miscellaneous improvements	3,07,760	(£20,517)
	Total ...	2,74,49,792	(or £1,829,985)

In the advances made for the spring crops it was considered of primary importance that the allotments and the actual distribution of the money should be made in good time. Instructions were issued to district officers before the end of

September, and within a few days allotments on a large scale were made, the actual distribution being commenced early in October. The new rules regarding these agricultural loans which give much greater prominence than had been the case before to the principle of making advances on joint responsibility and without vexatious inquiries into the security which individuals can provide, had just been issued, and these greatly facilitated the work of distribution. Nearly the whole of the district staff was in camp during the month of October engaged on this work. The method of distribution usually adopted was for a gazetted officer of the revenue staff to proceed to a convenient centre, investigate applications there and make the necessary advances in the presence of the assembled villagers from funds which had been drawn in the lump. There is no question that the large sums which were actually distributed could not have been issued in time to effect the desired object had the old cumbrous system remained in force. The presence among them of the district staff greatly encourged the cultivators. The promptitude with which the advances for the spring harvest were made is evidenced by the fact that in all except eight districts the distribution of the money for seed was completed before the end of November, although actual sowings in many cases continued until more than a month later. In four of the eight districts referred to the distribution of money for seed was completed early in December, sowings in all cases being made until the second week in January. The remaining districts are Dehra Dun where advances for seed were complete on the 20th December, and spring sowings continued until the 20th February (though both here and in Almora supplementary advances for seed were given after the rain in January which enabled later sowings to be made), Mainpuri and the uplands of Mirzapur, where the latest advances for seed were made by the end of the year and sowings continued until after the rain in January, and Fatehpur where advances for seed were given as late as the 20th January, sowings being made even after that date. The advances for temporary wells were made in the beginning simultaneously with the advances for seed and continued in many districts up to the middle of January and in a few districts even later. The advances for sugarcane were made in January, February and March.

The largest amount advanced for seed in any district was in Gonda which received over 10 lakhs (£66,600) while over 7 lakhs (£46,600) was advanced in Sitapur and 4½ lakhs (£30,000) in Kheri. Bareilly received nearly 4 lakhs (£26,400) and Shahjahanpur, Bara Banki and Hardoi over 3 lakhs (£20,000) each; 15 other districts received amounts of from 2 to 3 lakhs (£13,300 to £20,000). Bara Banki received the largest allotment for temporary wells, aggregating nearly Rs. 2,44,000 (£16,000). In this district the advances enabled

enough wells to be made to replace the irrigation from tanks which had dried up. Those tanks usually supply half the irrigation for the spring crops in the district. Agra and Hardoi also received over one lakh (£6,600) and Budaun and Jaunpur nearly a lakh for temporary wells. The need for advances for the purchase of cattle arose chiefly in the districts between the Ganges and the Jumna from Saharanpur to Etah. The largest advances, approximately Rs. 65,000 (£4,300), were made in the Etah and Meerut districts, while Rs. 45,000 (£3,000) was distributed in the Mainpuri district, Rs. 39,000 (£2,600) in the Benares district and Rs. 30,000 (£2,000) in the Aligarh district. Well gear, chiefly buckets and ropes, was exceptionally dear during the cold weather; sometimes, it is said, exceeding the cost of a temporary well. In some districts, therefore, large advances were made for the purchase of such gear, without which the wells could not have been worked. The advances made for this purpose amounted to over Rs. 2,17,000 (£14,400) in the Agra district, Rs. 1,16,000 (£7,700) in the Bara Banki district, Rs. 88,000 (£5,800) in the Rae Bareli district, Rs. 79,000 (£5,250) in the Lucknow district and Rs. 60,000 (£4,000) in the Muttra district. The advances for the sowing and watering of sugarcane were chiefly required in the submontane districts, where Rs. 50,000 (£3,300) were distributed in Kheri and Rs. 29,000 (£1,900) in Bijnor. The area under this important crop in the previous season was the highest on record and in spite of the unfavourable outturn, there was an encouraging eagerness again to sow a large area, which the grant of these advances has helped to stimulate.

The reports which were received from all district officers at the time of the spring harvest furnish the most eloquent testimony of the beneficial results of these advances. In several districts high prices and poor prospects had resulted in great stringency of credit at the sowing time, loans being in many cases almost unobtainable either from the ordinary money-lender or the zamindar. In Gonda for instance, the failure of the autumn harvest—an event almost unprecedented in that district—made the local money-lenders very reluctant to take risks, the situation being fraught in their judgment with dangers hitherto unknown. The action of the Government not only reassured the cultivating classes at an early stage, but undoubtedly encouraged the timid financier to make the usual advances with greater confidence. In consequence the area sown was probably almost the maximum area from which any crop could in the circumstances be expected. The total area sown in the province was only about two-thirds of the normal; but the unsown areas were those in which irrigation is not possible, and very largely those in which, in ordinary circumstances, the only possible crop would have been one of the inferior kinds which are sown in

continuation of early rice. In spite of the much larger advances which were given in the present year the area sown fell short of that sown in 1896-97, partly because the soil was much more parched and partly because in the present year the winter rains did not set in until January and were therefore too late to extend materially the area under spring crops, whereas in 1896-97, the winter rains were timely and there was a fall of rain in November 1896 which greatly extended the area sown in that year. On the present occasion it was impossible to do anything but concentrate efforts on land that could be irrigated in some shape or another, the result being, as has been shown in an earlier paragraph of this resolution, that the same outturn was obtained in the present year as in 1896-97 on an area probably almost a million acres smaller. There is no doubt, however, that strenuous efforts were made everywhere and that speculative sowings were made in the hope of timely winter rain, and even after the rain which fell in the middle of January. Many district officers have furnished estimates of the areas which would have been sown had advances not been procurable. Thus in the Etah district one-third of the area under spring crops is ordinarily dry, but with the aid of advances about half of this dry area was this year irrigated. In the Muttra district the whole area under spring crops amounted to two-thirds of the normal: in the more precarious tracts without advances the sowings would have been one-third to nothing. In the Lucknow district two-thirds of the normal area was sown, and no less than 94½ per cent. of the single crop area. In the Sitapur and Hardoi districts probably half the actual sowings were assisted by loans. In the Aligarh and Sultanpur districts the original estimate of probable sowings was half the normal but advances having been freely distributed, 75 per cent. of the normal was actually sown. In the Basti district it is estimated that the sowings were trebled with the aid of advances, 75 per cent. of a normal area being sown. In the Pilibhit and Mirzapur districts the sowings were probably nearly double what they would have been had no advances been given. Other districts give information less precise; but every district officer, with hardly an exception, has pointed with satisfaction to the relatively large area on which a crop was secured. In some districts also the borrowers were enabled to purchase seed of a better quality than they could otherwise have afforded. The immediate effect of the liberal grant of advances was therefore, to put heart into the people, to mitigate the stringency of credit, and to secure an area under spring crops as great as the circumstances of the season allowed.

But the land was very parched and to secure the spring crop great exertions were necessary. Too much praise cannot be given to the people for the manner in which they put

their backs into the work. If they have sometimes been thought to be apathetic in the face of a great calamity there was no sign of apathy on this occasion. Ploughing and watering were exceptionally heavy tasks and the demand for labour was in consequence very great, occasionally even exceeding the supply. In the Unao district with wages 50 per cent. in excess of those previously prevailing it was difficult to obtain labour; and numerous districts have reported that the labouring classes were fully employed so long as there was any sowing or irrigation to be done. In the Farrukhabad district proprietors were sometimes unable to get their own holdings tended, their regular servants being attracted by high wages elsewhere. The provision of employment in this way undoubtedly postponed distress in many places, and in several altogether avoided the necessity for general measures of famine relief. Despondency had in previous famines shown itself among the cultivating classes in the earlier stages and led them to abandon homes and holdings, and resulted in aimless wandering and even in serious crime. Several officers have noted the remarkable effect of the prompt and timely distribution of advances in changing the outlook for the cultivator. He set to work with a will, and did his utmost to get a crop. As a result he stayed at home and was contented, instead of scouring the country in search of work or plunder. In the Gonda district an outbreak of serious crime appeared to be checked as soon as the people realised that Government money was available in large sums for their assistance. There are many districts in which State advances on a large scale had previously been unknown and were not asked for, and unless the money had been brought to the cultivator's doors as it was, there is little doubt that a great opportunity would have been lost. That the large advances sanctioned by Government were distributed promptly, so that the best advantage could be taken of them, is due to the unsparing efforts of the district officials, European and Indian, at a time when the travel involved in their distribution could only be accomplished with much exposure and great inconvenience. It is impossible in the Lieutenant-Governor's opinion to give too much praise to the energy and devotion with which this work was carried out, and it is, he thinks, certain that no act of Government or its officers was even received with more appreciation and gratitude by the people. Sir John Hewett has been intensely gratified by the spontaneous expression of this thankfulness to Government for having come to the assistance of the agricultural population and of the appreciation of the manner in which all the district officials helped the people that he has received from almost every landholder who has come to visit him for the past 9 or 10 months, and from many a cultivator with whom he has chatted either in the field, on the roadside or in the village.

It is not possible to make an accurate comparison of the number of temporary wells which were constructed to irrigate the spring crops of 1897 and the number constructed in the present year, as the records of temporary wells do not show the number brought into use for the first time in any year; but as regards the total number of such wells available, figures are on record for 29 districts which show that in 1896-97 the number of temporary wells in those districts was 569,308, whereas in the present year the number was 794,913, an increase of 40 per cent. Although not all these wells were made within the year, it is probable that by far the greater number are due directly to the drought. It is unfortunate that the tract in which most wells were made, the country from Moradabad to Hardoi, has to be omitted from this comparison, as the figures are not available for the earlier period. In the present year Moradabad, Budaun, Shahjahanpur and Hardoi have each used approximately a hundred thousand of these wells, and it is certain that the increase over the previous period is maintained at least in the same proportion of 40 per cent. in these districts. The true interest, however, of the statistics which have been collected in the present year is their indication of the extent of country over which these wells can be made with advantage, provided the people are helped to make them. Of the districts compared the only decrease is in Muttra where well sinking in drought is often a failure owing to the salinity of the water; and the value of temporary wells can be judged from the fact that large numbers were constructed, not only in country such as Rohilkhand and North Oudh where other resources are wanting, but in canal districts like Aligarh and Farrukhabad, and spring-well country like South Oudh.

The special measures in connection with the grant of advances for masonry wells were undertaken with the double purpose of stimulating their construction while the severe object lesson afforded by the drought was fresh in the minds of the people, and of providing labour at a time when scarcity of employment might have driven workers to seek State relief. In Bundelkhand the district officers on their own initiative pressed the construction of field embankments to hold up the rain water and retain moisture in the soil. In many parts of this tract masonry wells are impracticable or excessively costly, and the best substitute is this process of embanking which enables the cultivators to secure greater benefits from the rainfall. The object aimed at was attained in both cases. The considerable sums advanced were in many cases supplemented from private capital by the zamindars and the substantial tenants who took loans; and the labour provided was of material assistance in staving off the pinch of scarcity. In the matter of embankments operations were most extensive in the Banda district, where Rs. 2,86,695 (£19,113)

was advanced. The provision of labour on these useful works without doubt delayed the appearance of distress in that district for a considerable period. The largest amount advanced for masonry wells (Rs. 4,43,000 or £29,533) was in the Agra district. Nearly 3¾ lakhs (£24,950) was advanced in Bara Banki and in Lucknow, and over 3 lakhs (£20,000) in Meerut. Basti received nearly 3 lakhs, Budaun and Rae Bareli 2 lakhs (£13, 300) and Gonda and Allahabad nearly 2 lakhs. Sums exceeding a lakh (£6,600) were advanced in the Muttra, Banda, Jaunpur, Ballia, Sitapur, Hardoi, Kheri and Sultanpur districts. As in the case of temporary wells so also in the case of masonry wells it is not possible to make an exact comparison of the number constructed to irrigate the spring crops in the present year and in 1897. At that time and for some years after, the statistics regarding wells were valueless, and it is only since about 1905, when a special enumeration was made to form the starting-point of a relatively accurate series of statistics that they can be used directly. The comparison so far as it can be made appears to show that about five new wells were made available in 1907-08 where three were made available in 1896-97. The new wells which are shown in the returns as made available for the first time in 1907-08 were 15,562: on this proportion there were 9,300 in 1896-97. It must be remembered that many of the new wells were begun before the drought declared itself, that is to say they were constructed in the ordinary course of agricultural improvement (but in some districts under the stimulus resulting from the drought of 1906). Similarly many of the wells (probably most) for which advances were given in the winter of 1907-08 will not appear in the statistics till 1908-09. From the figures however reported by district officers to the Board of Revenue it would appear that the number of new wells constructed in the present year by the aid of advances is not less than 25,000, involving in many localities a very substantial addition to the protective resources of the country. The fact remains that before the drought of the present year the practice of sinking masonry wells was on the increase, and so far as the statistics can be trusted was considerably more general than in the period before 1896, which was one of excessive rain and consequently unfavourable to the extension of means of irrigation. An attempt has been made by the Director of Land Records and Agriculture to calculate on the scanty data available the increase in the number of masonry wells which has taken place since 1896-97. In 21 districts the figures can be accepted as approximately exact. In these districts there are shown to be 299,385 masonry wells as compared with 258,120 in 1896-97. The number of wells available therefore has increased by about 16 per cent. in 11 years, and probably the true figure lies between 12 and 20 per cent. Taking 16 per cent. the comparison for the province as a whole would stand as follows:—

Masonry wells recorded in 1907-08, 572,769; calculated in 1896-97, 493,766. The net increase, therefore, may be put at about 79,000 wells, involving an investment (apart from the cost of replacing collapsed wells) of over 1½ crores or over one million pounds sterling. A more definite idea may be obtained of the rate at which masonry wells have been increasing of late years by taking the number of new wells made available in each year since the special enumeration. Omitting a few districts where the figures are doubtful the number of new wells made available was 6,859 in 1905-06, 12,116 in 1906-07 and 12,738 in 1907-08. In the districts for which figures have been taken 6·7 per cent. of the wells available in 1907-08 were constructed within three years, and in most districts the proportion is fairly uniform, ranging between 4 and 8 per cent. The districts where construction has been specially rapid compared with the number of wells previously existing are —

(1) five typical canal-irrigated districts—Bulandshahr, Aligarh, Farrukhabad, Etawah and Etah; (2) the Budaun district; (3) the Lucknow, Unao and Bara Banki districts in South Oudh; (4) the Sitapur and Bahraich districts in North Oudh. The first group is striking as illustrating the room for improvement even in districts where irrigation from canals is important; villages or parts of villages are always to be found where canal water cannot be obtained, or where the length of the minor channels makes its supply uncertain, and there has of late years been a distinct and highly advantageous development in the direction of supplementing the canal supply by wells. It has been assisted by liberal distribution of advances (prior to 1908) in Bulandshahr, Aligarh and Etawah, but not in Farrukhabad or Etah. The case of Budaun also is interesting. There seems to be no doubt that the people are looking for something better than temporary wells, even in places where they can be made readily, and for protection of the areas where they are made with difficulty; and the construction of permanent wells is being assisted and encouraged as far as possible. In this respect the district must be differentiated from the more northerly parts of Rohilkhand. Lucknow, Unao and Bara Banki are clearly differentiated from the Rae Bareli, Partabgarh and Sultanpur districts by the relatively small number of masonry wells, and it is satisfactory to see that so much leeway is being made up in them. Lucknow and Unao took large advances during and after the dry season of 1906, but Bara Banki had no such assistance. The figures for Bahraich and Sitapur (and to a less extent for Hardoi) may be taken with those of Budaun as indicating a northerly extension of the practice of sinking masonry wells, another most satisfactory feature in the returns; and in Basti also construction is proceeding rapidly.

Taking advantage of the fact that the benefits of masonry wells have been so clearly brought home to the people the

Government is pressing on a systematic scheme for their construction. A well survey has been undertaken in the last two years which aims at classifying every village in the province according to its needs and capacities. It is not yet complete and has necessarily been held over in districts where famine has been severe, but it is well forward and should be finished early next year, except in one or two districts. It has disclosed already an enormous number of villages where want of money is the only obstacle to construction of much needed wells. In these cases instructions have been issued that the offer of advances is to be made systematically in the individual villages, the object being to make the inhabitants of these villages realise that Government wants to see wells made and is prepared to finance them. The survey has also disclosed a large number of villages where the wells give an inadequate supply, and others where (in addition to want of money) trial borings are necessary to locate a suitable site. To meet these cases trained borers are being placed under the orders of district officers, working partly at the expense of Government and partly at that of the landholders. The demand for them is expanding rapidly and there will soon be over 50 sets of tools at work. The most encouraging feature is that some large landholders are now buying tools themselves and sending men to be trained in their use. There remain the cases where well construction is hindered by the objections of the landholders or by social prejudice. The number of such cases reported is comparatively rare and Collectors have been asked to use their influence as far as is legitimate. In the Jhansi district a special overseer has been placed under the Collector's orders to help people in deepening wells by means of dynamite through rock too hard for country powder to shatter. If this experiment succeeds, a similar step will be required in the Hamirpur district. It may be added that in the Muhamdi tahsil of the Kheri district, which lies quite outside the ordinary well tract, a demand for masonry wells is arising now that borings have demonstrated the existence of springs in some places. Mr. W. H. Moreland, C.I.E., Director of Land Records and Agriculture, has calculated the amount which may profitably be advanced by the Government during the next five years for masonry wells in districts suitable for their construction and recommends the allotment of 20 lakhs (£133,000) in the current financial year ending the 31st March 1909 and 25 lakhs (£166,500) in each of the ensuing years. In this connection it may be mentioned that much valuable information embodied in this resolution has been supplied by Mr. Moreland, whose long study and mature judgment of the economic conditions of the United Provinces has been of the greatest assistance to the Lieutenant-Governor throughout the past year.

Finally as regards the effect of masonry wells in securing a good spring harvest, the question can hardly be

treated on a statistical basis as so many of the factors of success cannot be stated in figures. As regards the area sown, masonry wells cannot indeed compete with a full canal supply. To prepare a seed-bed after drought, the maximum quantity of water is required in the minimum time, and the yield of wells is limited first by the diameter, which prevents the use of additional lifts, secondly by the cattle power available and in the last resort by the critical discharge of the well; but given an adequate supply of efficient wells and the cattle power to work them, there is ample evidence in the area returns of districts like Rae Bareli, Partabgarh and Jaunpur (outside the rice tracts) that the people can sow an area sufficient for their most pressing needs, enough, that is to say, to carry them over to the next harvest. And if the cattle last, the area sown by irrigation from wells is safe against further drought except in the special case where the sub-soil itself has dried; indeed observation suggests that the conditions so obtained are not far from the optimum in the case of cereals, though certainly less favourable to pulses than a normal season. While, therefore, it would not be justifiable to correlate the figures for yield with the number of wells available, the fact is clearly established by experience that given an adequate supply of efficient wells, of cattle to use them and of seed to sow, a district can at least feed itself from April to September after a drought as severe as that of 1907. The beneficial effect of the construction of temporary and masonry wells is strikingly illustrated by the following figures of the outturn of the wheat crop in the United Provinces and the Punjab. In the United Provinces the area sown this year with wheat was 4,406,500 acres compared with 7,044,000 acres sown last year, that is a decrease of 37 per cent. In the Punjab 7,171,200 acres were sown this year as against 9,100,100 last year, that is a decrease of 21 per cent. But in the United Provinces the outturn of the crop in the present year was 1,675,000 tons as against 2,165,000 tons last year, a decrease of only 22 per cent., whereas in the Punjab the outturn was 2,198,100 tons, which is 33 per cent. less than the outturn of the previous year. The advantage gained in this province is due to the assistance to canal irrigation given by wells, masonry and temporary.

The same policy which was adopted of making liberal advances for the spring harvest was continued when the time approached for sowing the autumn crops. Although large allotments were available by the middle of May, distribution of money for seed did not as a rule begin until the first or second week of June—the rains being somewhat late—and it continued until the rains had well set in, that is, till about the middle of July in several districts. Advances for cattle continued to be made much later; in some districts, such as Bahraich, loans were being given even in September in order

to help the ploughing of land for the next spring crop. The districts which received the largest advances for seed were Gonda (10⅓ lakhs or £69,000), Bahraich (7½ lakhs or £50,000), Mirzapur (5½ lakhs or £36,600) and Basti and Kheri (nearly 4½ lakhs or £30,000). Of the total amount advanced at this time nearly 30 lakhs (£200,000) was for the purpose of providing plough-bullocks for cultivators who had lost their cattle in the famine. The Bahraich district received nearly 2½ lakhs (£16,600) and the Hamirpur district nearly 2¼ lakhs (£15,000), while sums varying between 1¾ and 2 lakhs (£11,600 and £13,300) were distributed in the Gonda, Kheri, Banda and Unao districts and about 1½ lakhs (£10,000) in the Budaun, Agra and Cawnpore districts. It has been mentioned already that liberal allotments were made also for this object by the Committees of the Charitable Famine Fund. The result of these advances has been that the present autumn crops have been sown almost everywhere on an exceptionally large area.

Of the advances made for fodder excluding the advances of forest hay which are dealt with in a separate place the largest amounts were Rs. 91,000 (£6,000) in the Agra district and Rs. 33,000 (£2,200) in the Muttra district. Elsewhere advances for this object were not made on a large scale.

The foregoing account has indicated the benefits which accrue from a prompt and liberal distribution of advances in a season such as that of the past year. These benefits may be recapitulated. They are firstly, to put heart into the people; secondly, to ensure as full an area as possible being cultivated with spring crops; thirdly, to employ a large number of people at high rates of wages in irrigating and harvesting those crops, and thus to keep them off relief works; fourthly, to add permanently to the irrigated area; and fifthly, to keep open the ordinary sources of credit usually available. A further benefit, which became apparent at the close of this famine, is that the people have learnt that Government is looking after them and so leave the works more readily when agricultural conditions improve. The Lieutenant-Governor is glad to be able, in confirmation of these conclusions, to refer to the opinion of the Landholders' Association of the province of Agra, the British Indian Association, Oudh, and the Committee of the Upper India Chamber of Commerce who have warmly acknowledged the benefits which have been conferred by these advances upon the agricultural population. The manner in which the distribution was regarded by the people has already been mentioned. They learnt that Government was determined to do its best to help them and the moral effect of this belief was incalculable. Only one officer, the Commissioner of Lucknow, has voiced any complaint and that is that even more money was not given. Little less than 60 lakhs (£400,000) was in fact advanced for all purposes in the Lucknow division, and all that

the district officers asked for was granted. In no case was any application for funds refused. It may well be the case where advances are made on such a large scale that some cultivators got more than they really needed, and others not so much as they would have liked. No system of distribution to millions of recipients could possibly be perfect in insuring that each cultivator got all that he wanted and no more, but the Lieutenant-Governor is assured that neither cultivation nor irrigation was to any material extent restricted by the insufficiency of the advances made. It seems probable that in the event of another widespread failure of the crops the demand will be much greater than the enormous demand of the past season: and it seems certain that even in ordinary years the applications for advances will be much greater in the future than in the past. Incidentally it may be noted that the system of advances on joint responsibility has awakened many villages to the advantages of co-operation, and it is not too much to hope that the co-operative principle will receive a lasting stimulus. In this connection mention should be made of the advances given through Co-operative Societies which considerably exceeded 3½ lakhs (£23,300). Of this amount Rs. 1,68,000 (£11,200) was advanced in the Unao district, Rs. 58,000 (£3,800) in the Budaun district and Rs. 50,000 (£3,300) in the Bara Banki district.

It is, however, important that this extensive distribution should not be allowed to demoralise the people and no one will be found to dissent from the views expressed in 1901, by Lord MacDonnell's Commission that if lax notions of obligation are allowed to affect the question of the recovery of advances, their distribution will not be free from the pauperising influences of State charity. At the same time advances made on the occurrence of famine are protective as well as productive, and the Commission recognized that the strict enforcement of the rule for their repayment must be made subject to due regard being paid to the nature of the subsequent seasons and the circumstances of the recipients. In some tracts the advances given for the spring crop were unfruitful, either because unfavourable weather and early hot winds prevented the plants from coming to maturity, or because the cold weather rains came too late to enable dry land, which had been ploughed but could not be sown for want of water, to be planted at all. These areas are happily not large but in some of them at all events it will be necessary to remit some of the advances made, and in Sir John Hewett's opinion once the need for a remission has been established it is essential to make it at once. In a very few tracts the bad autumn harvest of 1907 has been followed by a bad spring harvest in 1908, and an indifferent autumn crop is now on the ground. Here some remission of advances will be necessary. The question is now under consideration: it is not likely that the total sum to be remitted will exceed 10 or possibly

15 lakhs of rupees (£66,600 or £100,000) a comparatively small amount (3·6 per cent. or 5·5 per cent.) of the total advanced.

The advances which were made for the purpose of replenishing food-stocks in the Kumaun division have been described separately and need no further mention in this place ; but in order to complete the subject of advances reference should be made to what was done in this direction by the Opium department, the estates under the Court of Wards and by taluqdars and landholders themselves.

The operations of the Opium department were of great assistance to the people. Between the 1st April 1907 and the 31st March 1908 the payments made to cultivators of poppy amounted to nearly 178½ lakhs (£1,190,000) including over 133¾ lakhs or about £892,000 as final payments for the opium crop of 1906-07 and 44⅔ lakhs (£298,000) advanced in the autumn for the coming crop. The value of the crop gathered in the spring of 1908 was estimated to be 130 lakhs (£867,000), which, although 30 lakhs (£200,000) less than it would have been in a normal year, represents a very substantial income to the cultivators of that crop. The advances made to opium cultivators for the construction and repair of wells in 1907-08 aggregated no less than Rs. 2,60,550 (£17,370), exceeding the total of advances made in a normal year by nearly 2 lakhs (£13,300). Of this amount Rs. 66,500 (£4,400) was advanced in the two districts of Budaun and Moradabad, Rs. 34,500 (£2,300) in the distressed districts of Gonda and Bahraich, and Rs. 25,000 (£1,650) in the two districts of Ghazipur and Benares.

Advances were made for the spring harvest on a liberal scale by solvent estates under the Court of Wards, the indebted estates being financed from the Government allotment. In all Rs. 7,84,300 (£52,300) was advanced, and some further sums were also distributed as advances for the autumn harvest. The largest advances were made in Oudh, where Rs. 1,48,396 (£9,900) was advanced in the Bahraich district Rs. 1,03,754 (£6,850) in the Bara Banki district and Rs. 78,030 (£5,200) in the Sitapur district. In Bara Banki the advances enabled the tenantry to sow a very fair area with spring crops by means of temporary wells and materially improved the rental receipts from that harvest. In Bahraich the results were less apparent, and in this district, as in Kheri, the system of paying grain rents, which prevails over large areas, besides being destructive of energy and self-reliance leaves a smaller share of the produce to the tenant and thereby diminishes his resources and capacity for meeting bad seasons. Except in these two districts the realisations of the rental payable from the spring harvest in the estates under the Court of Wards were better than had been at first anticipated and this recovery may fairly be attributed in a large measure to the liberality of the advances made by the Court of

Wards and by Government. The construction of masonry wells was also pushed on with satisfactory results in many of the estates either at the cost of the estates or by tenants with the assistance of the estates.

With regard to the action taken by taluqdars and other large landholders themselves in the distribution of advances to their tenants there is less information. In Oudh liberal advances are known to have been made by the Maharaja of Balrampur, the Raja of Muhammadabad, and the Rana of Khajurgaon. It is certain also that in many cases assistance was given in ways of which the value cannot be estimated in cash, and that the list given by district officers to the Board of Revenue of the advances which they know were distributed by taluqdars are not complete, particularly as regards the action of the smaller proprietors.

In the province of Agra large estates are less common, and information on the point is still less easy to obtain. On the whole the larger hereditary landlords appear to have realised their responsibilities; but the newer men, who regard their estates as a commercial investment did not, as a rule, care to provide advances when prompt repayment was doubtful.

CHAPTER XIII.

Scarcity of fodder and the measures taken for protection of cattle.

61. During the autumn months a serious scarcity of fodder was apprehended in many districts; but the situation entirely changed upon the timely arrival of the winter rains in January. From that date fodder was generally available, though almost everywhere it continued to be dear and scarce. In parts of Bundelkhand, especially in the uplands of the Banda district and in Hamirpur, in the uplands of Mirzapur, the Jumna side tract of Fatehpur and the greater part of the hills the situation became serious in the summer months, and the condition of the cattle in those tracts rapidly deteriorated. Owing, however, to the timely arrival of the monsoon all further anxiety was dispelled by the end of June, and the condition of the cattle began to improve. Generally it may be said that scarcity of fodder nowhere caused serious mortality among cattle such as occurred to an alarming extent in the Bundelkhand famine of 1905-06. The less valuable animals, no doubt, were sold to a considerable extent or died somewhat prematurely, but nowhere were the cultivators seriously embarrassed by the loss of their plough-cattle. The statistics of the Burma meat trade at Agra clearly indicate the greater stress of the fodder famine in 1905-06 compared with the present year. The number of animals slaughtered between the 1st April and 31st March was in 1905-06, 33,760; in 1906-07, 21,519; and in 1907-08, 21,546; being scarcely in excess of the figures of a normal year. In the large cattle market of Kunch in the Jalaun district the number of cattle sold in the previous famine amounted to 80,000; whereas in the present famine the total sales in the Jalaun district were only 32,000; of this number nearly 12,000 were purchased by residents of the district, 10,000 including nearly 8,000 plough-cattle were sold to outsiders, and 10,000 were sold to butchers. These figures compare very favourably with those of the year 1905-06. The loss of cattle in the present year was probably greatest in submontane Oudh, where the mortality, especially in the north of the Gonda district, was heavy in July, owing not so much to insufficiency of fodder as to exposure and surfeit of new grass, and a very considerable number of cattle were exported for sale in Bengal. But even here the losses were not sufficient materially to handicap the cultivators, and advances for the purchase of new plough-oxen were given on a lavish scale both from the Government allotment and from the Charitable Relief Fund.

The measures taken by Government were, owing to the extremely gloomy prospects between October and January, on a scale sufficient to have met a much more serious fodder famine than actually occurred. The principal measure was the cutting and baling of hay in the Government forests for supply to district officers upon indent. The cost of cutting and baling and of freight was borne in the first instance by the Forest department, and district officers were authorized to dispose of the hay either by sale, at a price fixed by Government or as a loan. In the matter of freight the principal railway companies consented to a reduction of their scale of charges for the carriage of famine fodder. The metre-gauge railways agreed to charge only two annas per wagon per mile for the first fifty miles, one and a half annas for the next 100 miles, and one anna for any additional distance, with double rates for bogie wagons. On standard gauge railways the rate was reduced to two annas per ordinary wagon per mile, and four annas per bogie wagon. The Government of India authorized a still further reduction of these charges: a nominal charge was fixed of ½ anna per ordinary wagon, or one anna per bogie wagon per mile, the balance between this rate and the rate charged by the railway companies being borne by Government and debited to famine relief. The selling price which was intended to cover the cost was originally fixed by Government at 12 annas per maund (82½lbs.), but was reduced on the 10th January to 10 annas per maund in consequence of the lowering of the railway freights.

The operations were conducted on a large scale in all the forests of the Eastern Circle. Preparations were made as early as the second week in August and during the remainder of that month and in September suitable areas for the cutting of grass were selected, baling presses were ordered and every arrangement was made to start work at a moment's notice. The cutting and baling of grass commenced on the 25th September in the Kheri and Pilibhit Forest divisions, and by the end of October was in full swing in all the forests of the Eastern Circle except in Gorakhpur, where operations commenced about the middle of November. Large indents were at this time being received from a number of districts. Upon the arrival of the winter rains, however, it became apparent that there was to be no serious fodder famine. Orders to stop the cutting of grass were issued on the 24th February, and all baling operations ceased in the month of March. On the 24th February the selling price of grass was reduced to five annas, and at the close of the hot weather district officers were instructed to dispose of any grass remaining on their hands at whatever price it would fetch.

The total quantity of grass cut was about 22,360 tons, of which nearly 15,580 tons were baled and 15,031 tons supplied to districts. At the close of operations 5,745 tons of unbaled hay and 1,142 tons of baled hay were left on the hands of the Forest department. The loss by wastage and fire in the forests

was very small, as elaborate precautions against incendiarism had been taken, and amounted only to 442 tons. The greater part of the surplus undisposed of was in the Pilibhit division, where operations were conducted on the largest scale, nearly 7,350 tons of hay being cut. The Kheri and Bundelkhand divisions provided about 5,500 and 4,600 tons respectively. The districts receiving the greatest quantity of hay were Banda, 3,255 tons; Hardoi, 2,150 tons; Bahraich, 1,130 tons; Unao, 1,100 tons and Lucknow, 1,000 tons.

The expenditure incurred by the Forest department amounted to Rs. 2,29,341 (£15,290) in the cutting and baling of grass and Rs. 39,698 (£2,646) in railway freight. Eighty-nine baling presses also were purchased at a cost of Rs. 38,900 (£2,593).

Of the 15,031 tons of hay supplied to districts, about 6,500 tons were sold, the greater part at the rate of 5 annas a maund (Rs. 8-8-0 a ton), 5,450 tons were advanced on loan at the same rate, 750 tons were lost through dryage, by fire or in transit, and about 2,300 tons were left undisposed of. The receipts from sales amounted to Rs. 55,895 (£3,726) and the amount of the loans to Rs. 46,132 (£3,075). The net loss therefore of the operations in the Eastern Circle, excluding district expenses and the cost of the presses, which will be of permanent use in the Forest department, was about Rs. 1,67,000 (£11,134).

In the Western Circle operations were conducted on a small scale in the Ganges and Siwalik divisions. Work commenced in November and ceased in February, 1,142 tons of grass being cut and baled. There was no demand for this grass, as the adjoining districts of the Rohilkhand and Meerut divisions did not suffer from any serious scarcity of fodder. The grass was sold eventually for what it would fetch, with the exception of 400 tons for which no purchasers could be found. The expenditure incurred was Rs. 11,447 (£763) in cutting and baling, and Rs. 5,850 (£390) in the purchase of 13 presses. Receipts on account of sale amounted to Rs. 7,959 (£530). The net loss therefore, excluding the cost of presses, was Rs. 3,488 (£233).

In the circumstances it was not to be expected that these operations, undertaken as an insurance, to meet an eventuality which providentially never arose, could yield satisfactory results from a pecuniary point of view. There is no doubt, however, that but for the rain that fell in January every ton of hay produced would have been utilized and the operations could have been considerably extended. It is the first time that a measure of this kind has been attempted on a large scale in this province: and much valuable experience has been gained and is on permanent record in the reports of the divisional forest officers. It has been calculated that in an average year the forests could supply 36,750 tons of hay without interfering with ordinary grass-cutting operations and that with all other

grass-cutting operations suspended upwards of 80,000 tons could be supplied.

In this connection the Lieutenant-Governor wishes to make special mention of Mr. T. Carr, in charge of the Bundelkhand Forest division, who displayed the greatest energy and care in coping with a great amount of extra work, spread over a very large area and often of a difficult or unpleasant nature. Mr. Canning in Kheri, and Mr. Whitehead in Pilibhit, also deserve praise for much hard work done and for the pains they took throughout these operations to bring them to a successful issue. Mr. Jackson, Conservator of Forests, Eastern Circle, supervised the extensive operations in his Circle most carefully. The Lieutenant-Governor also desires cordially to acknowledge the assistance rendered by the management of the Rohilkhand and Kumaun and Great Indian Peninsula Railways in the transport of the hay.

The Lieutenant-Governor thinks that the following deductions may be drawn from the hay operations of the Forest department during 1907-08 :—

(1) That if operations are undertaken early in October, some 35,000 tons of hay could be procured in any year in the Eastern Circle without working at a greater distance than 10 miles from a railway station.

(2) That all grass-cutting should be commenced as soon as labour is procurable, and be completed by the end of December at latest.

(3) That the hay procurable is of good edible quality, though not at once very palatable to animals accustomed to a finer quality of grass. The quality would probably be improved by regularly cutting over the same areas.

(4) That the cost of cutting, carting and baling of hay within the 10-mile limit should not exceed 5 or 6 annas a maund delivered on the railway.

(5) That a better class of hand baling press should be searched for. The best hand-press used was the Gahagan press costing Rs. 450 (£30), with an outturn of 40—50 bales of 2 maunds each daily ; but that this press was not worth the sum charged for it, as the quality of the materials from which it was made was very inferior.

(6) That, if the hay-pressing operations can be conducted near a railway, it would probably, where water is available, be preferable and nearly as cheap to use steam hydraulic-presses with a much bigger outturn and more compact bales costing only one-third to two-fifths of the freight of the hand pressed bales when conveyed by railway.

(7) That all work should be done by contract or piece-work, and not through departmental agency.

(8) That until the present schedules of rates for carriage of grass by railway are simplified and reduced, there is little hope for the development of a regular hay industry.

(9) That, if hay-making operations ever become a regular industry in the forests, specified areas should be reserved in suitable situations for such operations and excluded from other grass leases.

In addition to the operations of the Forest department arrangements were made with Messrs. Abbott Brothers of Jhansi for the supply of fodder to the Bundelkhand districts. On the 17th November the Famine Commissioner visited Jhansi, and in anticipation of a great shortage of fodder in Bundelkhand, if the winter rains failed, placed a contract with Messrs. Abbott for 6,000 tons of hay and 2,000 tons of *bhusa* or chopped straw at a rate of Rs. 12-12-0 per ton. The rate was somewhat high but the grass-cutting season was nearly over, and the prospect of a good *bhusa* crop in the spring was uncertain. Later on Messrs. Abbott agreed to supply a certain amount of hydraulically baled hay, at an additional charge of Rs. 7-10-0 to Rs. 11 per ton according to quality. This offer was accepted owing to the great saving which could be effected in railway freight, as much of Mr. Abbott's fodder had to be railed for more than 200 miles. On the 16th January, after there had been good and general rain throughout the province, as district officers were reducing the amount of their original indents in anticipation of a fresh crop of grass springing up, the Famine Commissioner again visited Jhansi and agreed with Mr. Abbott that the original contract should be reduced by 2,000 tons of hay and 500 tons of *bhusa*: and that as much of the hay as possible should be hydraulically baled instead of being delivered loose. On the 14th May Mr. Abbott cancelled the contract for a further 370 tons of *bhusa*, and agreed with the Famine Commissioner to get rid of another 920 tons of *bhusa*, which was not required, at a loss to Government of not more than Rs. 3-6-0 a ton. At the same time a fresh contract was placed for 590 tons of baled hay, which was urgently required in the Banda district at Rs. 28-14-0 a ton, delivered at Banda. Much of Messrs. Abbott's hay was coming from such distant places as Saugor and Bhopal. All this fodder was despatched to the Jalaun, Hamirpur and Banda districts with the exception of 370 tons, which was sent to Agra. Government had to pay for 220 tons of hay, which were spoilt by rain while lying at Government risk at railway stations in January awaiting despatch. It was not worth railing and was sold locally for what it would fetch.

The Government are indebted to Messrs. Abbott for their assistance. They showed great energy in collecting the supplies contracted for, were most courteous in meeting any request for cancellation of contracts, supplied most excellent fodder and were working at rates which gave only a small margin of profit. The above transactions cost Government Rs. 43,100 (£2,873) in payment to Messrs. Abbott, against which must be set receipts from the sale of the fodder amounting

to Rs. 17,948 (£1,196) and the value of the fodder advanced on loan Rs. 16,370 (£1,091), leaving a net loss to Government excluding the expenses incurred in the districts, of Rs. 3,782 (about £586).

Finally 670 tons of hay were received in the Banda district from the forests of the Central Provinces, one-fifth of the amount being sold at 5 annas a maund (Rs. 8-8-0 a ton) and the remainder advanced on loan at the same rate.

The total expenses incurred locally in the districts in connection with the handling and sale of the fodder and the cost of carriage when it was transferred from one district to another amounted approximately to Rs. 28,000 (£1,866), which must be added to the items of cost above enumerated.

62. In addition to the pressing and baling of hay in Government forests for export to the districts where fodder was scarce, two further measures were introduced with the object of providing additional fodder for cattle. The first of these was the opening of all Government forests for the free cutting and removal of grass from the 20th November 1907 until towards the end of July 1908. This concession was much appreciated in the Bahraich, Gonda, Naini Tal and Bundelkhand forest divisions. In each of the two latter divisions the quantity of grass cut is estimated at about 2,000 tons. Grass was also cut to a less extent in the Siwalik, Garhwal and Kheri divisions. In some cases, as in the Kumaun division, the right already existed in the case of the majority of villages in the neighbourhood of the forests. It is said that in the Bundelkhand division the people frequently sold the grass instead of storing it for their own use and were compelled later on to buy grass when the scarcity of fodder increased.

The second measure was the grant of privileged rates for grazing in Government forests and the provision that on the requisition of the district officers forest areas usually closed to grazing should be opened to grazing at concession rates.

In the Eastern Circle reduced rates, amounting in most cases to one-half of the ordinary grazing fee, were levied in the Kheri, Bahraich and Gonda divisions. In the Banda range of the Bundelkhand division rates were reduced only in the case of cattle from 16 non-forest villages. The number of cattle of all kinds grazed at privileged rates exceeded 30,000 in the Bahraich division; but in the Kheri and Gonda divisions the concession was appreciated less because of the superior grazing-grounds in Nepal, to which large numbers of cattle were sent. The transit fees formerly levied in the Kheri and Bahraich divisions by the Forest department on cattle traversing the Government forests on their way to the grazing-grounds of Nepal were abolished in October 1907.

In the Kheri division 8,500 acres of the *cis*-Sarda closed forest were opened and provided grazing for over 6,000 cattle. A small area of closed forest also was opened in the Gonda division, but elsewhere it was not found necessary to open reserved areas. Free grazing was permitted to the Tharus living on the Southern boundary of the Kumaun forest division.

In the Western Circle concession rates for grazing were not found necessary; but a larger number of cattle than usual were brought to the forests, and a larger area than in ordinary years was utilized for grazing.

These measures involved considerable loss to the Forest department in the cancelment of a number of contracts for the collection of grass, in the reduction of grazing fees and in the actual damage done by the cattle.

Enhanced grazing fees were to have been introduced in the Tarai and Bhabar Government Estates from 1st October 1907, but their introduction was postponed and a much larger number of cattle than usual were brought into this grazing area from the neighbouring districts of the Rohilkhand division and the Rampur State.

63. In order to complete the account of the measures which were taken to utilize the resources of the Government forests for the relief of distress it should be mentioned that the free collection of edible produce, namely fruits, seeds and roots, was permitted in the Bahraich forest division and the Tikri and Bhambar ranges of the Gonda forest division as early as August and September 1907, and the concession was extended to all Government forests in the province on the 20th November and continued in force until the end of September 1908. Compensation was given when necessary to contractors for minor forest produce. Wherever Government forests bordered on distressed areas the neighbouring villagers took full advantage of the concession, especially in the Pilibhit, Kheri, Bahraich, Gonda and Bundelkhand forest divisions. The Tharus also living to the South and the inhabitants of the villages situated to the North of the Kumaun forest division, and those bordering on the Siwalik and Naini Tal divisions collected edible forest produce in considerable quantities. No attempt can be made to estimate the amount of forest produce thus utilized, but it is stated that by the end of the hot weather about 1,000 tons had been removed from the forests of the Kheri division, and nearly 2,000 tons from the Gonda division where the demand far exceeded the supply. Many of the divisional forest reports give interesting lists of the varieties of forest produce most in demand. The fruits of the *mahua (Bassia latifolia)*, *tendu (Diospyros tomentosa)*, *bel (Ægle marmelos)*, and *ber (Zizyphus jujuba)* were the most popular, and not less than 1,700 tons of *khajur* roots *(Phœnix acaulis)* are said to have been removed from the Gonda division alone.

CHAPTER XIV.

Food stocks and trade. Prices and the effect of high prices on crime. Immigration and emigration.

64. When the monsoon of 1907 failed in September, food stocks throughout the province were, without doubt, very low. Importation, however, had commenced on a considerable scale as early as July, and from September onwards until the end of the year importation of wheat and gram from the Punjab continued in ever-increasing quantities. Importation of rice also from Burma commenced on a large scale in October. The extent of this importation may be appreciated from the fact that the net excess of imports over exports of food grains between July and September 1907 amounted to 224,000 tons, whereas in 1905 it was only 24,000 tons, and in 1906 the surplus of exports was 32,000 tons. The figures for the last quarter of 1907 are even more striking, the net excess of imports over exports amounting to about 341,000 tons, compared with 30,000 and 22,000 tons respectively in the corresponding periods of 1905 and 1906. From January 1908 weekly figures of imports and exports of food grains by rail were received from all railway stations in the province. These figures show that, taking the province as a whole, imports were in excess of exports throughout the famine. Importation reached its maximum in January, the net excess of imports during the fortnight ending the 18th January amounting to 77,169 tons. Importation continued on a decreasing scale until during the fortnight ending the 9th May the net excess of imports was only 1,875 tons. From that date, however, importation again increased. An analysis by divisions shows that all divisions imported more than they exported until the end of March. The Gorakhpur division from the beginning of April, and the Meerut and Rohilkhand divisions from the middle of April, show an excess of exports. The Lucknow division also shows a temporary excess of exports during the latter half of April and the earlier half of May. In the Agra division from April onwards exports and imports were almost equally balanced. The Allahabad, Fyzabad, and Benares divisions, which contain the bulk of the famine districts, were throughout the largest importers, and in these divisions imports considerably exceeded exports during the whole period of the famine.

Similar results appear from an analysis of the separate figures for each of the famine districts. During January and February about half the net excess of imports in the province was in the famine districts. The proportion steadily increased

until from the latter half of April the net excess of imports in the famine districts actually exceeded the net excess of imports for the whole province, showing that outside the famine areas exportation generally was in excess of importation. The districts which imported most largely were Gonda, Bahraich, Lucknow, Bara Banki and Kheri. There was also a steady stream of importation into Bundelkhand especially into Banda; this importation assumed very large proportions from March onwards as until then the Bundelkhand districts had been able in great measure to support themselves on the surplus of the good harvests of 1906-07. In the earlier months of the year importation was on a large scale also in the Jaunpur, Sitapur, Mirzapur and Fyzabad districts. The activity of trade throughout the famine was very noticeable, and furnishes an additional proof—if such were needed—of the well established principle that so far as regards the maintenance of a sufficiency of food in the markets private enterprise is able to meet the utmost requirements of a season of famine without any intervention by the state.

The situation in the Himalayan districts, however, required special measures; but was sufficiently met by the grant of advances free of interest to grain-merchants and the system of grain credit orders which has been described in an earlier paragraph of this resolution, where it was pointed out that by means of these measures Government avoided the necessity of itself importing a single ton of grain.

In Mirzapur also there were peculiar difficulties. The large upland area to the south of that district is extremely difficult of access. The only available routes for the transport of grain into the Dudhi and Singrauli parganas are from the north of the Mirzapur district owing to the badness of the roads in the direction of Bengal and the native states to the south. In addition cholera broke out in epidemic form and added greatly to the difficulties of transport. The carriage of grain was stimulated as far as possible by cash advances to small grain dealers and the owners of pack-bullocks, but in the rains the cost of carriage, which has to be entirely effected on pack-bullocks, rose to Rs. 1½ per maund (82½lbs.) from Ahraura, a railway station on the East Indian Railway, to Robertsganj and as much as Rs. 3 per maund on from there to Singrauli, with the result that in July wheat flour was selling at 2 sers (4⅛lbs.) to the rupee, *mahua* at 6 sers (12⅜lbs.) and barley at 5 sers (10¼lbs.) when obtainable. It was only by the indefatigable efforts of the district staff and by a most liberal allowance of gratuitous relief that the situation in this part of the district was prevented from becoming critical. Yet even here no starving people were to be seen even when prices were highest, and the ripening of the early autumn crops, which were fortunately both good and plentiful, put an end to the period of tension.

65. The movement of prices since the famine of 1896-97 may be summarised as follows. In 1898 there was a temporary return to normal conditions, but the extensive drought over large parts of India during 1899 was followed by a recurrence of high prices for a period that lasted through the year 1900. Normal conditions were then restored and in the latter part of 1904 the low prices prevailing were the subject of general comment. The frost of 1905 brought an abrupt change, and prices were high during the spring of that year: they fell somewhat when the spring crops were harvested, but never became easy, and they rose sharply again as the result of the drought in that autumn. The high level then reached was maintained through the year 1906, and even the fine autumn crops of that year brought little change owing to the keen demand for export to Bengal and Behar. Such fall as did occur disappeared in the spring of 1907, when the injury to the wheat crop was assured; and when the rains of 1907 were due wheat was selling at from 11 to 12 sers (22¾ to 24¾lbs.) to the rupee and other grains at proportional rates.

These high prices indicated clearly the relative shortness of stocks, and when the rains were delayed there was a further rise above the 11 sers (22¾lbs.) rate for wheat, while other staples became comparatively dearer. From this point the movement of prices can be followed in the diagrams appended, which show separately the price of wheat, and of whatever common food grain was cheapest for the time being, throughout the famine periods of 1896-97 and 1907-08. Taking first the diagram which shows the price of wheat, it will be seen that except for a brief period in September prices have been uniformly higher in the later than in the earlier period. The difference was not marked in October and November, but while November was the worst month in 1896, in 1907 prices rose further until the end of December: the rainfall of November 1896 doubtless accounts for this divergence. From January to May was a period of falling prices in both years, but it is noteworthy that while in the earlier year the harvest brought a sudden drop followed by an abrupt rise, in 1907 the corresponding movement was barely perceptible.

In the second diagram the same general phenomena recur. Some kind of food was for the moment cheaper in part of September and also in November in 1907, but as a rule prices were consistently higher until the end of May, and the continuous rise lasted longer and attained a much higher maximum. At the spring harvest again, the fall was marked in 1897 but barely perceptible in 1908, and the only striking difference between the two diagrams is that common food has been slightly cheaper during June, July and August than was the case eleven years ago. This last result would not have been reached if the averages of various coarse grains had been taken; it is due to the success of the large area sown with barley

during the current year, which kept down the price of that staple when some crops such as gram were considerably dearer.

In comparing then the two periods of famine the noteworthy contrasts are :—(1) The food of the upper and middle classes has been dearer throughout the later period, and very much dearer from December to July. (2) The cheapest food was dearer almost throughout the period until the end of May, the difference being most marked from December to February and again in April. (3) Prices followed what must be regarded as the expected course in such a season attaining their maximum in December and January; there was no abnormal check to the rise such as was caused by the rain of November 1896. (4) There was no rush to sell the spring crop such as the diagrams disclose in 1897.

This last fact probably indicates some improvement in the economic position of the cultivators, though it is difficult to assign a precise value to the influence of market speculations at this period; but the persistence of the higher range of prices shows at once the magnitude of the calamity and the intensity of the distress that resulted. When things were at their worst in the earlier famine, a man could buy 20¼lbs. of some food for a rupee : in the later, there was a time when he could get only 17¾lbs. Translated into terms of money this means that at the time of greatest stress in 1907, six days' food cost as much as seven days' food in 1896 : or taking the prices in the whole period from October to March in the two years, the full grain-diet of a labourer in the central parts of the province—two pounds daily of the coarsest grain—which in normal times would cost less than eight rupees, cost for the six months Rs. 16-12-0 in 1896-97 and Rs. 18-1-0 in 1907-08. The actual difference of Rs. 1-5-0 does not look large on paper; but it might mean the actual want of food for three days in every month, or an equivalent reduction in the daily consumption; but when multiplied by the number of persons to whom the calculation applies—perhaps somewhere about 20 millions if dependants are included—it gives a rough measure of the increased intensity of the distress caused by high prices in the more recent famine.

It may be added, as indicative of the total failure of the rice harvest and the depletion of the stocks of that grain, that rice of the best sort was on an average sold at 4½ sers (9¼lbs.) and common rice at 6¾ sers (13¾lbs.) to the rupee on the 1st February 1908, as against 6¼ and 8½ sers (12¾ and 17½lbs.) on the 1st February 1897, and common rice was only ⅛ ser (¼lb.) cheaper on the 1st August than on the 1st February 1908. *Arhar* also which did very well in 1897, and was a poor crop in 1908, sold at 7¼ sers (15lbs.) to the rupee on the 1st February 1908 as against 9⅛ sers (18¾lbs.) on the same date in 1897. It should be remembered that the prices quoted are those at

district headquarters situated on railway lines, and that prices were much higher in the interior where the distance and difficulty of carriage, especially in land-locked areas like the south of Mirzapur, the north-east of Bahraich and the Kumaun districts, added greatly to the price of food. In Mirzapur, for instance, at the end of August the price of the cheapest food grain varied from 10 to 3 sers (20⅝ to 6¼lbs.) to the rupee or even less in different parts of the district, while in the greater part of the Garhwal district little more than 5 sers (10¼lbs.) of any food grain could be obtained for a rupee. The price basis, by which the wages payable on relief works and the allowances for gratuitous relief are determined, is fixed by the price prevailing in the nearest market of the cheapest grain in common use. This price basis inevitably was and remained much higher in the present year than in 1896-97. Prior to the spring harvest the price basis was on an average 9 or 10 sers (18½ or 20⅝lbs.), though in many places it was for a time much higher than this, and even after that harvest it was not found possible materially to reduce the basis in the seriously affected tracts such as Bundelkhand and North Oudh and in a number of other districts such as Cawnpore, Fatehpur and Benares, where it remained on an average not less than 10 or 11 sers (20⅝ or 22¾lbs.) until the close of relief operations. In some of the less seriously affected districts in Rohilkhand, the Agra division and the east of the province a reduction to a 12-ser (24¾lbs.) and in a few cases to a 13-ser (26¾lbs.) basis was effected. In 1896-97 on the other hand a 12-ser basis was introduced in March in all the less seriously affected districts and this was gradually extended until early in August all districts in the province were working on a 12 or 14-ser (24¾ or 28⅞lbs.) basis. In the present year the exceptional tracts, such as Mirzapur and Kumaun, worked on a price basis far lower than that in use in normal districts. In Mirzapur for instance the price basis at all periods of the famine varied from 4 or 5 sers (8¼ or 10¼lbs.) to 10 sers (20⅝lbs.) in different portions of the district, and in the interior of Garhwal a 6-ser (12⅜lbs.) rate was maintained.

66. In view of the high price of food the Government sanctioned, in accordance with the standing orders contained in the Civil Account Code, a special compensation allowance to all whole-time Government servants, excluding chaukidars (watchmen) and patwaris (village accountants), with effect from the 1st October 1907. This allowance was at first fixed at one rupee per mensem for all those whose monthly pay was Rs. 10 or less, if the average price of the food grains in ordinary use was dearer than 11 sers (22¾lbs.) to the rupee in the plains, or 9 sers (18½lbs.) in the hills. From the 1st January 1908 the further concession was allowed that if the average price of food grains was dearer than 9 sers to the rupee in the plains, or 7 sers (14½lbs.) in the hills, an allowance of Re. 1-8-0

per mensem should be given to those whose monthly pay was Rs. 10 or less, and one rupee per mensem to those whose monthly pay did not exceed Rs. 15. From the 1st April the rates were again modified, one rupee per mensem being paid to all those whose monthly pay did not exceed Rs. 16, if the average price of food grains was between 10 sers and 12 sers (20⅝lbs. and 24¾lbs.) in the plains, or between 8 sers and 10 sers (16½lbs. and 20⅝lbs.) in the hills; and if the average price exceeded 10 sers (20⅝lbs.) in the plains or 8 sers (16½lbs.) in the hills, the concession allowed was Re. 1-4-0 to those whose pay did not exceed Rs. 10 per mensem, and Re. 1-8-0 to those whose pay was between Rs. 10 and Rs. 16 per mensem. These allowances are still being given, and it is not possible as yet to state exactly what their cost will be; but a probable estimate places it at approximately 5½ lakhs (£40,000) down to the end of the present financial year (31st March 1909).

67. The orderly behaviour of all classes of the population was very noticeable throughout the famine, and justifies the belief that the people are in a better position than formerly to resist distress, and that the liberal policy of Government in making large advances as soon as the situation was defined had the effect of keeping agriculturists and labourers at work and out of mischief. It was however inevitable that the abnormal dearness of food should be accompanied by some increase in crime. Statements nos. V to X, appended to this resolution, give the statistics of cognizable crime from September 1907 to July 1908, compared with the corresponding period of 1906-07 which was of a normal character. The total number of cases of reported crime was 171,417 in the later period as against 126,128 in the earlier, and the average monthly incidence per 10,000 of the population was 3·26 as compared with 2·40.

An increase in ordinary crime such as petty theft and pilfering of grain is the normal accompaniment of a season of scarcity and is to some extent a fair test of the severity of distress. Cases of this description account for the greater part of the increase of crime in the present as compared with the previous year. They were however considerably fewer than in the famine period of 1896-97, as is apparent from the diagram attached which compares the number of cases of theft and house-breaking in these three years, the total number of such cases being 148,758 in 1907-08, 106,766 in 1906-07 and no less than 190,671 in the corresponding period of 1896-97.

Some increase also over a normal year was to be expected in cases of violent crime. It amounts only to 8 per cent. in cases of rioting and unlawful assembly, while in cases of arson there is practically no increase, 557 cases being recorded as against 556 in the preceding period; but there was an increase of 58 per cent. in cases of dakaiti and robbery, 1,927 cases being recorded as against 1,220. The increase in the latter class of crime was most noticeable in North Oudh where 103

cases occurred in the Bahraich district as against 34 in the previous year, 94 cases in the Kheri district as against 40, and 67 cases in the Gonda district as against 21. High figures are also recorded in the Bara Banki, Lucknow and Sitapur districts. This is due largely to the fact that a wave of violent crime, in which professional gangs were concerned, swept through North Oudh in the early months of 1907 before there was any threatening of scarcity, increasing in the course of the year owing to the immunity which the dakaits at first enjoyed, and was not finally brought under control until the year 1908 was well advanced. The dakaities in Bara Banki, Lucknow and Sitapur are almost entirely attributable to professional gangs, and in Bahraich and Gonda, though famine affected the figures to some extent, professionals (mostly from Nepal) are reported to have been mainly responsible. The robberies also were in many cases undoubtedly committed by the same persons who committed the dakaities. If we compare the statistics of violent crime in 1907-08 with those of 1896-97, we find that there were 649 cases of rioting and unlawful assembly in the corresponding period of the earlier famine as compared with 801 on the present occasion, 1,792 cases of dakaiti as compared with 1,927, and 1,027 cases of arson as compared with 557.

In normal years crime usually increases to some extent in the winter months when agricultural operations are slack, decreases at harvest time and increases in June and July. This movement was clearly marked in the present year also, but the rise in January and the decline in the following months were sharply accentuated in conformity with the movement of prices. The usual increase occurred at the close of the hot weather and during June and July, but the rise was not so marked as in the corresponding period of 1897, and the total volume of crime was much less than in the winter months. As the whole province was affected by the stringency of prices, the increase of crime was naturally not confined to the famine districts. The incidence of crime per 10,000 of the population was higher than in the previous year in all parts of the province except in the Gorakhpur division. The increase was greatest in the Rohilkhand, Fyzabad, Meerut and Lucknow divisions, the districts with the highest average monthly incidence being Lucknow (5·94), Hardoi (5·08), Pilibhit (5·13), Kheri (5·00), Bahraich (4·73) and Sitapur (4·44). In this connection it may be pointed out that there was no distress in the Meerut division and very little in Rohilkhand, while there was scarcity only, and not famine, in the Lucknow and Pilibhit districts.

The conduct of the workers in the famine camps was throughout exemplary. A solitary instance from the Mirzapur district is recorded of an attack being made by the workers of a famine camp on the shops of the banias located on the work. The damage done was small and the banias were indemnified by Government for the loss.

68. The small numbers in the poorhouses are conclusive evidence of the absence of any general wandering of people from their homes in the course of the recent famine. Emigration to Bengal, Assam and Burma takes place in normal years to a vast extent from the eastern districts and from Oudh, and an account of this movement is given in a later paragraph of this resolution. In October and November 1907 there was in some of these districts an appreciable increase in the stream of emigration, but it ceased as soon as the prospects of the spring harvest were assured and was never sufficient to call for special comment. Trans-oceanic emigration also took place on a slightly larger scale from the Basti and Gonda districts, but the numbers are insignificant.

Immigration from the Native States which border on the Agra, Allahabad and Benares divisions might have been expected in a season of drought, but such immigration was in fact remarkably small. Where relief works were situated close to the border, a certain number of workers were inevitably attracted from the adjoining states, posing in most cases as residents in British territory; but no difficulty ever arose from this cause, and in the few cases when it was necessary to return a certain number of residents of Native States to their homes, officials of those States were always ready to make the necessary arrangements. The States surrounding Bundelkhand and Agra were in fact but slightly affected by scarcity, and the Darbars of these States made adequate provision for their own people. Immigration was most noticeable into the Mirzapur district, where in April 1,100 immigrants from the Rewah State and 1,400 from the Palamau district of Bengal were at work in the Singrauli and Dudhi parganas. The Bengal Government made adequate arrangements for their people, but the immigrants from Rewah were allowed to remain on the works in Mirzapur. Besides these a considerable number of immigrants from Rewah without doubt returned themselves as residents of Mirzapur; and many members of the aboriginal tribes, such as Ghasias and Dharkars, came from the neighbouring States of Sargooja, Korea, and Chand Chakhar to live with their relatives in the Dudhi and Singrauli parganas. They were generally fit objects for gratuitous relief and obtained it. On the northern border of the province there was a small amount of immigration from Nepal into the Bahraich district, while a corresponding movement took place to Nepal of labourers, who left their families to be supported by Government.

CHAPTER XV.

Public health during the famine period.

69. The general health of the people throughout the year was carefully watched by the Government with a view to the early recognition of distress in any district and as an indication of the adequacy of relief measures. In accordance with the regulations of the Famine Code, district officers were required to report monthly by telegraph the number of deaths in their districts, and fortnightly reports on the health and condition of the general public were sent by all district medical officers to the Sanitary Commissioner for the information of Government. A monthly return also was received by Government from the Inspector-General of Civil Hospitals, showing any increase of illness or disease believed to be due to want of food, the number of patients received in famine hospitals or treated on relief works and the distribution of the subordinate medical staff on famine duty.

The death-rates in September and October 1907 which were 2·87 and 3·28 per thousand of the population as compared with the normal rate, calculated on the mortality of the previous decade, of 3·02 and 3·36 for those months indicate that the high prices which prevailed in those months did not produce any adverse effect on the public health. In November the death-rate rose to 3·48. The mortality was high in several districts owing to the prevalence of fever, cholera and small-pox; but the physical condition of the people generally was fair and the death-rate was very slightly below the normal rate for the month of November, which is 3·49. In December there was a marked increase in the death-rate, which reached 4·10, the maximum rate recorded in any month during the famine; the physical condition of the people was in general fair, but in almost all districts fever, small-pox, plague and measles were very prevalent. The normal death-rate for the month is 3·31. The death-rate in January (3·66), though lower than that in the preceding month, was considerably above the normal (2·72). The increase was due to small-pox and fever and to the abnormal weather during the 2nd and 3rd weeks of January, when the excessive cold and fog, following upon the winter rains, told severely upon under-fed and under-clothed people and brought on pneumonia and lung diseases. Plague was also prevalent to some extent. The death-rate continued to fall and in February was 2·77 as compared with the normal rate of 2·39. In several districts, notably Sitapur, Hardoi and Bahraich, the mortality was somewhat above the normal, but it was chiefly due to small-pox

and plague, and the increase was not large enough to give rise to the belief that the distress was seriously affecting the public health in those districts. A few cases of emaciation were at this time noticed among wandering strangers in poorhouses and also among non-working children on relief works, emaciation being in some cases aggravated by disease. Steps were at once taken to supply such persons with special food and to place them under medical treatment. There was a slight increase in the death-rate in March, but it was very little in excess of the normal, being 2·94 as compared with 2·91. In some districts the mortality was below and in others somewhat in excess of the normal. The excess, where it occurred, was due to small-pox, measles and plague, notably in the Bahraich district which recorded the high death-rate of 5·02. In April the provincial death-rate was 3·35 as against the normal rate of 3·12. The district death-rates again showed considerable variation and where they exceeded the normal, small-pox, measles and plague were the principal causes. Fever contributed to the high death-rate of 5·40 recorded in the Bahraich district. Cholera also was prevalent in the remaining districts of the Fyzabad division and in the Gorakhpur and Benares divisions. The increase in the death-rate continued in May, when it was 3·75 as compared with the normal of 3·06. Cholera, measles and small-pox combined to make the mortality above the normal in a number of districts, particularly in Sitapur which had a death-rate of 6·07, and in Bara Banki (5·92), Gonda (5·05) and Kheri (5·03). Several relief charges had to be broken up on account of cholera, but dispositions for the institution of small civil works were pushed on and helped to minimize the danger. Preliminary arrangements were undertaken during May for the free distribution through official and non-official agencies of large quantities of quinine in all severely affected districts in the hope of preventing much of the heavy mortality in the autumn months from the fever which usually follows on famine. This distribution of quinine was continued throughout the rains and is still in progress. There was a slight decrease in the death-rate in June, which was 3·63 as against the normal of 2·76. In many districts cholera and small-pox helped to raise the mortality above the normal. Mirzapur registered in this month the high death-rate of 6·27, which was due largely to cholera, fever and measles. In July there was a noticeable decline in the provincial death-rate which was 2·64 as compared with the normal rate of 2·45. The decline was general throughout the province, the only district which recorded a death-rate of over 4 per thousand being Bahraich (4·38); cholera was still prevalent in several districts, but was far less virulent. During the month of August though four or five districts suffered severely from cholera, and there was an exceptionally severe outbreak of

autumnal fever in those divisions where the rainfall had been heavy there was for the province as a whole no marked increase in mortality. The provincial death-rate was only 2·83, as compared with the normal rate of 2·55, and with 3·36 in August 1897. This low death-rate at the close of a period of famine is a satisfactory indication of the adequacy of relief measures. The divisions most affected by fever have been Meerut, Rohilkhand and Agra which again were those least affected by the famine, and in fact some of the famine districts have had less fever than is usual in August.

Taking the eleven months from September to July the provincial death-rate was 36·47 in 1907-08 as compared with the normal for that period 32·59. The difference cannot be considered excessive if the magnitude of the crop-failure and the many dangers from epidemic disease which have always to be encountered in a season of famine are considered. The mortality is, it is true, higher than that recorded in the corresponding period of 1896-97, when the provincial death-rate was 32·10, actually below the normal rate recorded in the last ten years. The consequence of a series of bad years and high prices is reflected in the death-rates of the three last years (1905 to 1907) which, excluding plague, were 35·95, 37·61 and 36·56 against an average mortality of 32·56 for the ten years from 1892 to 1901. The increase in the mortality of the present year is therefore slight as compared with the mortality of the years immediately preceding. Turning to those districts which record the highest figures during the famine period, it is natural to find among them several of the famine districts. The highest death-rate for the eleven months from September 1907 to July 1908, 45·29, is recorded in Jalaun, as compared with a normal rate of 34·39. The principal cause of mortality was fever which alone accounted for a death-rate of 37·72 in that district. Jalaun recorded a death-rate of 60·58 during the eleven months from November 1905 to September 1906. Bahraich follows with a death-rate of 43·53 as against a normal of 31·15. Fever, cholera, measles and small-pox were all epidemic in this district, which felt the effects of famine perhaps more severely than any other, the more so because the people had not previously suffered to any great extent from a similar calamity and did not readily appreciate what famine meant. They were slow to avail themselves of relief and delayed coming on the works. Kheri returned a death-rate of 42·93 as against a normal of 34·38, Sitapur 41·83 as against 31·71, Gonda 39·09 as against 28·35, Basti 38·96 as against 28·03, Bara Banki 38·72 as against 31·43 and Banda 37·27 as against 27·70. In Kheri, Sitapur and Bahraich the mortality due to fever alone amounted to 34·41, 29·09 and 27·51. Outside the famine area several districts recorded death-rates higher than in many of the famine districts, though less high than in the districts above mentioned relatively to the normal. Thus Cawnpore

recorded a mortality of 44·69 compared with 38·80, the normal rate, Bareilly 44·86 compared with 39·34, Bijnor 44 compared with 37·81, Shahjahanpur 42·86 compared with 34·82 and Farrukhabad 43·95 compared with 38·88. In 1896-97 the highest death-rate for the eleven corresponding months 52·30 was recorded in Hamirpur, while seven other districts had death-rates above 40, namely Jhansi 50·13 ; Banda 48·34 ; Fatehpur 46·22 ; Hardoi 44·89 ; Pilibhit 43·44 ; Shahjahanpur 43·38 and Bareilly 43·29. The proportion of deaths—due allowance being made for the fact that the male population exceeds the female by 6·5 per cent.—was somewhat higher among males than among females, the excess of deaths among males being 11·5 per cent. This fact has been observed also in former famines. The reasons probably are that men are more exposed to the vicissitudes of weather than women, and as the latter cook the food it is possible that they sometimes take advantage of the opportunity and help themselves. It may be mentioned incidentally that the birth-rate, which to some extent indicates the health and well-being of the population nine months previously, remained considerably higher throughout the whole period than in the corresponding months of 1896-97 and gave no indication of a departure from a normal condition of health. The birth-rate from September to July 1907-08 was 38·96 per 10,000 of the population as compared with 31·68 from September to July 1896-97 and with 36·05 and 36·40, the corresponding figures for 1905-06 and 1906-07.

Turning now to epidemic diseases it has been noticed in the course of the narrative that cholera, small-pox and measles were prevalent in many districts during a great part of the period under review. As regards measles there is no doubt that this disease is becoming more prevalent and more fatal in recent years in this province ; and it claimed no less than 88,357 victims during the period from November 1907 to July 1908 as against 46,862 and 32,667 in the corresponding periods of the two preceding years.

Cholera is a danger which has constantly to be guarded against during famine. The shortage of the water-supply in a year of drought makes its contamination very probable and impure supplies are likely to be used. The danger becomes proportionally greater when large numbers of labourers and their dependants are collected in famine camps. During September and October 1907 cholera caused a considerable number of deaths in the Bareilly district, and during November it was prevalent also in Fyzabad. In December it abated considerably and from January to March 1908 the province was practically free from the disease. In April it reappeared in some of the Eastern districts and part of Oudh, but it was not until May that its attacks began to assume a virulent form. In that month the disease appeared in 31 districts, being worst in Bara Banki and Mirzapur where the death-rates from cholera were

1·40 and 1·12. It was severe also in Fyzabad, Gonda, Sultanpur, Basti, Jaunpur, Sitapur, Rae Bareli and Lucknow. In June, which is usually a bad month, the rise in mortality from cholera continued and the provincial death-rate from this cause was ·35, being ·57 in the famine districts. Jhansi alone of the famine districts recorded no cases, while Mirzapur (2·49), Bara Banki (1·54) and Sultanpur (1·03) suffered most. Outside the famine area 9 districts only were free from the disease, Unao recording a mortality from it of 1·20. During July the epidemic rapidly abated, though it broke out in portions of the hill districts, and the highest death-rates recorded were Garhwal ·84, Bahraich ·73, and Mirzapur ·70. It is satisfactory to note that in spite of the almost universal prevalence of the disease, only 508 deaths from cholera occurred on relief works and 8 in poorhouses during the period from September to July, while the total mortality from this cause in the province amounted to 39,684. All the deaths which took place on relief works and in poorhouses occurred in 7 districts, as shown in the margin. The small number of deaths on the relief works as compared with the virulence of the epidemic in these districts generally is very noticeable. It is unfortunate that the statistics of deaths from cholera on famine works and in poorhouses during the famine of 1896-97 were not separately recorded and cannot therefore be compared with those of 1907-08, but in the former famine cholera attacked more works and claimed more lives than in this famine. In March 1897 at one time over 100 deaths were occurring daily in the Allahabad district on famine works. During this famine no case of cholera was reported on a relief work until the 3rd week of April. All necessary measures were taken to meet the outbreaks when they occurred; special detailed instructions were issued by the Sanitary Commissioner to the local authorities with particular reference to the safeguarding of the water supply and the arrangements for satisfactory sanitation. Captain Nesfield's process for the purification of drinking water was introduced on famine works and met with striking success, particularly at the Lalganj famine camp in the Mirzapur district, where a serious outbreak of cholera was at once checked by the disinfecting of all the wells on the charge and in the neighbouring villages by this process. For disinfecting wells permanganate of potash was ordinarily employed, and cyllin and phenyle were used as disinfectants in all famine hospitals. The inquiries made by the Deputy Sanitary Commissioner into the cholera outbreaks in Mirzapur and Bahraich established the fact

Deaths from cholera.

District.	On relief works.	In poor-houses.	In the whole district.
Mirzapur ...	186	...	3,950
Bahraich ...	134	3	1,751
Kheri ...	97	2	571
Sitapur ...	86	...	1,018
Banda ...	2	2	629
Bara Banki ...	2	...	3,096
Gonda ...	1	1	1,918
Total ...	508	8	12,933

that the cholera in no case originated on the works but was imported from surrounding villages, the initial cause of the epidemic being the spread of infection by pilgrims returning from the large fairs, such as the Magh Mela at Allahabad, the Ajodhia fair at Fyzabad and the Syad Salar at Bahraich. The Lieutenant-Governor acknowledges with gratitude the splendid devotion to duty shown by so many of the subordinate Indian officials, who kept to their posts throughout the epidemic at the risk and in some cases at the cost of their lives.

Two European officers, Mr. Darley and Captain Benwell, were attacked by the disease but recovered.

Small-pox is always extremely prevalent in dry years owing to the high winds and dust by which the infection is spread. Between November and July of the present year it caused no less than 59,639 deaths, but of these only 447 occurred on relief works and 19 in poorhouses. The only districts in which a large number of deaths occurred on relief works from this cause were Bahraich with 238 and Sitapur with 120 deaths, the mortality from small-pox in these districts in the same period being 938 and 170. Considering the number of deaths from small-pox in the province, the mortality in famine works and in poorhouses must be regarded as insignificant, but there were undoubtedly a very large number of cases which ended in recovery. The statistics of 1896-97 are in this case also not available for comparison. All possible arrangements were made to combat the disease and vaccinators were appointed to all famine charges to vaccinate unprotected persons. In the Sitapur district, where small-pox prevailed throughout the relief operations and on every charge, vaccinators were sent to the works as soon as the outbreak occurred, but they had to be withdrawn as a panic took place among the workers who imagined that they were to be inoculated against plague. Subsequently however vaccination was started on some works under the personal supervision of the Civil Surgeon and later on a vaccinator worked on each relief work.

Speaking generally it may be said that the people showed wonderful fortitude and endurance in withstanding the privations of the past season. The Sanitary Commissioner on his tours of inspection and many other officers remarked on the good physical state of the majority of those on the works. The condition even of children in arms, who are the first to feel the effects of a dear and scanty food supply, was generally good, and there is no doubt that the judicious feeding of young children and suckling mothers on the works—which has been referred to in an earlier portion of this resolution—resulted in many lives being saved. Emaciated persons were naturally to be seen—people who had delayed coming on the works owing to a disinclination to leave their homes—but the proportion was small and they were selected for special treatment under medical supervision. No doubt many people with weakened

constitution died from diseases supervening, to which, had they been in their normal state, they would not have succumbed. In times of scarcity people naturally enough eat what in other circumstances they would avoid and on this account diarrhœa and dysentery are specially rife and many deaths occur from these causes. Eleven deaths only, or about a quarter of the number reported due to this cause in London last year, were recorded which after full enquiry could be attributed directly to want of food. There was no inclination to conceal deaths due to starvation and the fact that so few deaths occurred is an eloquent testimony to the adequacy of the relief measures.

The task of supplying a sufficient number of qualified medical subordinates to take charge of the arrangements in famine hospitals imposed a severe strain upon the resources of the Medical department. The permanent establishment of civil hospital assistants was much below the sanctioned strength, and an appeal made to other provinces was not very successful. In order therefore to meet the extra demand private native doctors and pensioned hospital assistants had to be engaged, but this source of supply, which was limited, was soon exhausted and the Government of India were asked for the services of eighty men. Thirty military hospital assistants, 25 civil hospital assistants from Bombay and 12 from Eastern Bengal and Assam were deputed to this province, who with 12 passed students and retired men from other provinces, brought the total of outside helpers to 79. The Lieutenant-Governor is grateful to the Supreme Government and the Governments of Bombay and Eastern Bengal and Assam for the readiness with which help was given to him. Including these 79 men, 356 medical subordinates of all classes were entertained for famine work. Of these 89 were permanent civil hospital assistants of this province, of whom 33 were engaged in famine work in addition to their other duties, 143 were native doctors engaged locally and 45 were pensioned hospital assistants. In addition assistant surgeons in charge of dispensaries were, wherever necessary, placed in additional famine charge and two military assistant surgeons were appointed famine inspecting medical officers in the Allahabad and Bahraich districts. The officers employed on plague inoculation work at Sitapur and Gonda were also employed as famine inspecting officers. Each famine camp was placed in charge of a medical subordinate, and as far as possible civil hospital assistants of dispensaries were placed in additional charge of poorhouses. In cases where the poorhouse was situated at a distance from the dispensary, or where the additional work could not be satisfactorily done by the medical officer of the dispensary, a whole-time medical subordinate was appointed to the poorhouse. Though it was not always possible to supply as many compounders as were asked for, the Inspector-General of Civil Hospitals is able to report that medical relief did not in

any way suffer on this account. It may be mentioned that in Garhwal, in addition to the permanent dispensaries, two travelling camp dispensaries were opened on main roads leading from the Kotdwara and Ramnagar grain depôts along which a large number of villagers passed daily during a great part of the famine period. Each hospital was fully equipped with medical and surgical necessaries, obtained on indent from the Medical Store Depôts at Calcutta and Mian Mir, and until the stores were received the demand was met by loans from the district stock and, where necessary, by local purchases. Suitable arrangements were made for the supply of medical comforts such as condensed milk, Mellin's and Benger's food, rum and brandy for children and weakly adults: and bedding and blankets were supplied, where required.

The Lieutenant-Governor is under obligations to the Hon'ble Colonel R. D. Murray, I.M.S., Inspector-General of Civil Hospitals, for his oversight of matters connected with medical aspects of famine relief and to Major J. Chaytor White, I.M.S., Sanitary Commissioner, for his effective supervision of sanitary arrangements.

The following medical officers also deserve special mention for good work:—

Major W. H. Orr, I.M.S., Civil Surgeon, Bahraich.
Major C. Milne, I.M.S., Civil Surgeon, Gonda.
Major W. Selby, I.M.S., Civil Surgeon, Sitapur.
Captain E. J. O'Meara, I.M.S., Civil Surgeon, Mirzapur.
Captain G. Hynes, Civil Surgeon, Kheri.
Captain J. Burns, Medical Inspecting Officer, Bahraich.

Among Hospital Assistants the following are specially commended:—

Mahbub Ahmad, Bara Banki; Mani Mohan Bhattacharji and Birj Mohan Lal, Bahraich; Munshi Wahir Khan, Jhansi; Musharraf Ali Khan, Parshottam Das and Baldeo Singh, Gonda; Ram Rao Anand Rao and Sri Rang Ram Chandra, Kheri; Muhammad Husain, Nagar Mal and Tulshi Ram, Mirzapur; R. Vithal Belsare, Family Domains, Mirzapur; also Native Doctor Pandit Subh Karan Pande, Bahraich.

CHAPTER XVI.

The extension of railways and improvement of communications. The development of canal irrigation.

70. In the Resolution on the Administration of Famine Relief in the North-Western Provinces and Oudh during 1896 and 1897, Lord MacDonnell drew attention to the important part played by railways in the prevention as well as the alleviation of famine by the maintenance and distribution of the food supply. It will be convenient here to review the expansion of the railway system since 1897 in order to see how far the extensions which have been carried out have aided the recent relief measures and what further extensions, if any, are necessary for the adequate protection of the province.

Lord MacDonnell expressed the opinion that only three protective lines remained to be constructed; these were the Ghaziabad-Moradabad-Ramnagar, the Bareilly-Soron, and the Shikohabad-Mainpuri-Farrukhabad line. The recent experience of the 1905-06 and 1907-08 famines however serves to show that this programme of protective lines was inadequate, for not only have these three lines been constructed but also a number of others and still much remains to be done in opening up and protecting important areas. In the year 1897 there were 3,253 miles of open line in the United Provinces, and since then the mileage has been increased 35 per cent. by the construction of 1,134 miles of new line. The extensions of the Oudh and Rohilkhand and Bengal and North-Western Railway systems have been the largest, amounting to 440 and 210 miles: and on the East Indian Railway, Rohilkhand and Kumaun and Great Indian Peninsula systems there has been an extension in each case of over 100 miles of line, and almost as much on the Shahdara-Saharanpur light railway.

Three of the lines constructed, that is to say, the lines from Khurja to Hapur, Hapur to Meerut and the Delhi-Agra Chord may be regarded as mere improvements in direct railway communications. All the other lines however though they were not taken up solely for protective purposes, may be said to be, partly protective lines, and they have materially lessened the severity of the recent famine by better distribution of the grain supply. Four of these new extensions in particular have been invaluable in facilitating actual famine operations. The Hardwar-Dehra line greatly facilitated the importation of grain to the distressed area of Jaunsar-Bawar in the north of the Dehra Dun district. The Uska-Tulsipur line which formed the remaining link in the loop between Gonda and Gorakhpur, *vid* Balrampur, passes through the most distressed

areas of the Basti and Gonda districts. The Moradabad-Ramnagar line connected with the main Oudh and Rohilkhand Railway line the grain mart of Ramnagar, which was the chief centre for grain distribution in Almora and parts of Garhwal. The Ait-Kunch line assisted one of the distressed portions of the Jalaun district both in the famine of 1905-06 and that of 1907-08.

Since the year 1897, a number of other lines have been approved and recommended by the Local Government and their construction will nearly complete the system of railway communications necessary for the protection of the province. The lines referred to are :—

Allahabad to Rae Bareli and Rae Bareli to Unao; Barhwal-Sitapur; Balamau-Sitapur; Rosa-Sitapur; Pilibhit-Shahjahanpur; Karwi-Rajapur; Kunch-Jalaun-Madhogarh; Pilibhit-Barmdeo; Agra-Hathras; Cawnpore-Banda; Pakhrain-Auraiya; Azamgarh-Goshainganj; Muttra-Aligarh; Phaphund-Auraiya; the Dumaria-Tiwaripatti and Captainganj section of the Bengal and North-Western Railway; the extension of the Mailani-Dudwa branch from Sonaripur to Ramnagarghat and the Hardoi-Sandi railway. It will be seen that with the exception of the Agra-Hathras and Muttra-Aligarh links, all these lines may be regarded as in some measure protective. Of special importance in this respect are the Karwi-Rajapur, Kunch-Jalaun-Madhogarh, and Cawnpore-Banda lines, which will facilitate communications with parts of Bundelkhand which are particularly liable to famine, and will lessen the possibilities of famine by improving the trade of those parts. The Cawnpore-Banda line in particular will tap the *babul*-growing tracts of the Hamirpur and Banda districts where owing to the lack of communications the supply of bark for the tanning industry is practically unexploited.

The earthwork of some of these projected lines has proved a valuable source of famine relief. The Kunch-Jalaun-Madhogarh line was taken up in 1905-06, and in the recent famine the Balamau-Sitapur, Rosa-Sitapur and Barhwal-Sitapur lines provided work for many thousands of labourers in the Sitapur, Hardoi, Kheri and Bara Banki districts. The Government of India further approved of the earthwork on the Unao-Rae Bareli-Allahabad, Azamgarh-Goshainganj and Cawnpore-Banda lines being taken up for famine relief, but in the case of the two former lines it was not found necessary to provide employment in those localities, and the sanction for the last named line was received too late to admit of work being started.

Three portions of the province are, in the Lieutenant-Governor's opinion, still unprovided for even by the lines approved of by the Local Government for future construction. These are firstly the central and southern portions of the Mirzapur district, where during the recent famine the communications were so bad that, as has been already mentioned,

grain in the Dudhi and Singrauli parganas was selling for 2 sers (4⅛lbs.) to the rupee, secondly the northern tract of the Gonda and Bahraich districts to the north of the Rapti river, where much difficulty was experienced in the distribution of food supplies, and thirdly the Garhwal district.

As regards Mirzapur, the country in the southern part is difficult and the feasibility of even light railway communications will have to be carefully examined. Probably the best scheme would be to protect the central area by constructing a light railway from Mirzapur to Robertsganj, which is situated about 10 miles from Chopan (on the river Sone) on the road from Mirzapur; or as an alternative, to construct a road for motor traffic on which, if it proves a success in this country, a Renard road train could be run. A suitable road for the purpose already exists for 17 miles from Mirzapur to Mariaon. There is no satisfactory means of opening out the southern portion of the Mirzapur district by way of Robertsganj and Chopan, and to protect this an extension of the Sone East Bank-Daltonganj line should, if feasible, be constructed to Dudhi and Singrauli.

A metre-gauge extension or a light tramway traversing parts of the Bahraich and Gonda districts from Nanpara through Bhinga to Balrampur or Tulsipur would, the Lieutenant-Governort hinks, afford material protection to this tract of country.

The Garhwal district cannot be tapped by railways, but an improvement in the communications of the district is certainly desirable, and a cart road from some point on the Kotdwara-Lansdowne road to the Niyar valley with two branches thence to Srinagar and Baijrao respectively would be of great benefit; south-east Garhwal and south-west Almora would also be much helped by a branch cart road from the Ramnagar-Ranikhet road in the direction of Bhikyaka-sain and Ganai.

71. The extension of canal irrigation since 1897 has been no less marked than the improvement of communications, but in this direction also there is still much to be done. In the resolution on the famine of 1896-97 the opinion was expressed that, apart from the great Sarda scheme, there was not much scope in this province for the extension of canals. The possibilities however were again reviewed by the Irrigation Commission of 1904 and attention was then drawn to new lines of advance and the reinvestigation of several old abandoned schemes was recommended. Moreover since the Commission presented their report a number of schemes of a protective character in the tract of country south of the Jumna have suggested themselves. On the conclusion of another famine it is desirable again to examine the position and to show both what has been done since the last famine and in what direction extension is being made and can be made in the future. The divisions adopted in the Irrigation Commision's report have been adopted for convenience.

Turning first to the submontane tract, the district of Dehra Dun on the west is protected by five small canal systems, the westernmost fed from the river Jumna, the others from small hill streams. Constructed more than fifty years ago these canals do not, in all instances, give a supply sufficient for the growing needs of the population ; they are essentially protective works, as in the absence of wells the countryside is absolutely dependent on them for a water supply both for household use and for irrigation of crops. Owing to their having been constructed with non-hydraulic lime the channels of some of these canals are wearing out, and the remodelling of them has become an absolute necessity. In this process it should be possible to make a substantial addition to the facilities for irrigation. The Katapathar canal should be remodelled so as to provide a larger supply for the western Dun and the river Song can be diverted so as to feed the Rajpur canal in the central Dun. These schemes for which projects are being prepared will cost about 11 lakhs of rupees (£73,000) and it is hoped that work on them will soon be commenced. In other parts of Dehra Dun it is only possible to economize existing supplies by the improvement of the old channels to bring them up to modern standards ; of this a good deal has been already done. Eastward from Dehra Dun as far as the Pilibhit district there has been no extension of irrigation since 1897 beyond that resulting from the improvement of the existing Bijnor and Rohilkhand canal systems, which are fed mainly by very small hill streams, the replacement of the old earthen embankments by masonry weirs and regulators and the construction of properly aligned channels. For the Rohilkhand canals with their precarious supplies the suggested Sarda-Ganges feeder, which will be referred to later, would prove a great boon since it should not only secure the area covered by the existing canals but also admit of considerable extensions to the south of the Bareilly district and the tract lying between the Ghurra and Ramganga rivers in the Shahjahanpur district. Apart from this, though something may be done to improve the existing small irrigation works on the hill streams of the Bijnor and Moradabad districts the only scheme which gives promise of any utility in this tract is a canal from the Ramganga river which would pass through the Afzalgarh pargana of the Bijnor district into the Thakurdwara pargana of the Moradabad district where there is urgent need of irrigation to protect the precarious rice areas. Originally proposed in 1871, this project was, with the other projects for irrigation of the central tract of Moradabad, abandoned a few years later. There is a sufficiency of supply in the Ramganga river and as estimated in the original project it would command 240 square miles of good soil. It is proposed to reinvestigate the scheme in the ensuing cold weather. From Pilibhit eastward to Gorakhpur the numerous streams that cross the Nepal border have been

to a considerable extent utilized for irrigation generally by throwing earthen dams across the streams. These indigenous methods are often ineffective as for lack of proper escape power the embankments are frequently breached at a critical time with the result that the rice crop dependent on them is injured. They are moreover a source of continuous friction between landholders, dams being placed for individual benefit at sites which injure other parties. There have been numerous difficulties also with the Nepalese who naturally object to the erection of embankments which may injure lands in Nepal. For the better utilization of the supply from these streams and its more economical distribution mutual co-operation between the two Governments is desirable. His Excellency Major-General Maharaja Sir Shamsher Jang Bahadur, G.C.B., G.C.S.I., Prime Minister of Nepal, is understood to be ready to consider proposals to this end. Two further suggestions have been made for the improvement of the irrigation of this area, firstly the construction of a canal from the river Rapti at a point in Nepalese territory near where the river leaves the hills passing thence into British territory in the Bahraich district; secondly a canal from the Gandak river for the central tract of the Gorakhpur district. This line has been inspected in the last cold weather and there is sufficient evidence in its favour to justify the undertaking of a regular survey. It is proposed in the ensuing cold weather to detail survey parties to examine these various schemes.

The central tract of the province has next to be considered. For the irrigation of the area between the Ganges and the Ramganga in the districts of Bijnor, Moradabad and Budaun the Eastern Ganges and Western Ramganga canal projects were prepared and after much discussion abandoned. The Irrigation Commission recommended that the question should be reconsidered. In the Budaun district and the eastern portion of Moradabad canal irrigation can without doubt be usefully introduced and this area will be commanded by the suggested Sarda-Ganges feeder canal.

After the famine of 1896 attention was again drawn to the project for a canal from the Sarda river. The enquiries then made led to the opinion that canal irrigation could not be profitably introduced, except in the districts of Lucknow, Hardoi, Sitapur and Bara Banki, but in view of the danger of raising the water level, already high, and of the strong local opposition to the canal, Lord MacDonnell recommended that the scheme should be finally abandoned. The Irrigation Commission again revived the project, pressing for its serious consideration for the protection of the Hardoi district. On this recommendation an estimate was prepared for a canal which would pass through a portion of the Pilibhit district and through Shahjahanpur, then, cutting through the south-west corner of Kheri, traverse,

the Hardoi district except the portion west of the Ghurra river, pass through the west of the Lucknow district and end by irrigating a small portion of Unao. It provided for the irrigation of 360,000 acres at a cost of 126 lakhs (£837,000). The opinion expressed by Sir James LaTouche in submitting the scheme to the Government of India was that it should rest on the value of the canal as protecting Hardoi, and that it was for this district that the canal was needed and not for the other districts through which it would pass. In view of the doubts and dangers which attended the scheme and the local opposition to it the Government of India decided that the question of its construction should be postponed. Sir John Hewett has further considered the matter, and expressed his opinion regarding it at the meeting of the Legislative Council at Lucknow on the 7th April last. He considers that the extension of irrigation in the greater part of Oudh should be mainly effected through the multiplication of masonry wells. It is also possible that a scheme for the irrigation of the south-east portion of that province may ultimately be found feasible by the utilization of the waters of the Gogra. The Hardoi district suffers much at times from an excess of water. For this district a scheme of drainage works has been drawn up which while withdrawing the surplus flood waters will provide a system of compensation embankments calculated to retain within the permanent tank area for the irrigation of outlying lands a supply equivalent to that retained in years of good rainfall, and to free in time for the spring sowings the large areas now flooded and lost to cultivation in such years. It has been already mentioned that two of these drains were undertaken as relief works in the present year and on their success will depend the undertaking of similar works.

With the view of increasing the cold weather supply in the existing system of Ganges canals the Irrigation Commission suggested the possibility of diverting a portion of the volume of the Sarda river across to the Ganges above the head of the Lower Ganges canal. This has been examined and found to be a perfectly feasible though costly enterprise as the canal must cross all the drainage of the country and more than one big river. The idea is that the feeder, starting from Banbassa on the Sarda river in the Naini Tal district, should run westwards through the Kumaun Tarai to the boundary of the Rampur State, in this length supplementing the often insufficient supplies of the Rohilkhand canals from which it is expected that an increased area of 80,000 acres will come under irrigation, and then, cutting through or heading the Rampur State, enter the Moradabad district and bending southwards cross the Ramganga river and eventually be carried on to the Ganges canal near Naraura in the Bulandshahr district. The project provides for the irrigation of from 150,000 to

200,000 acres in the Moradabad and Budaun districts. The Rohilkhand canals can with advantage be enlarged and extended into the southern part of the Bareilly district, and into the tract between the Ghurra and Ramganga rivers in the Shahjahanpur district. The volume delivered to the Lower Ganges canal should suffice to maintain a full supply in that canal at all seasons of the year, and would release the supply now passed down from the Upper to the Lower canal for use on the Upper Ganges, Agra and Eastern Jumna canals. For the latter a feeder canal would be cut from the Ganges canal to take up its irrigation in the Meerut and Muzaffarnagar districts. This in turn would free two-thirds of the cold weather supply of the Eastern Jumna canal, now used in this province, for the benefit of the Punjab where the water is greatly needed for the protection of the Rohtak and Hissar districts. A rough estimate of the gross cost of these feeder canals amounts to close on $5\frac{3}{4}$ crores of rupees or £3,800,000; it is expected that their construction would result in the increase of the irrigated area in this province by nearly a million acres, and of that in the Punjab by more than 200,000 acres, giving an anticipated return of 7 per cent. on the gross expenditure. The project is at present in only a preliminary stage and these figures are merely approximate estimates. The details cannot be worked out without further surveys which, it is hoped, the Government of India will permit to be undertaken in the ensuing cold weather.

In the country lying between the Ganges and the Jumna a capital expenditure of nearly a crore of rupees (£660,000) has been incurred since 1897 on the three major canals in that area, providing an increase of 2,096 miles of canal and distributary channels. In addition to the construction of the Fatehpur and Mat branch canals, the greater part of the expenditure has been in the direction of the extension and improvement of distributary channels to economize water and to ensure its equal distribution over as wide an area as possible. These measures have resulted in an increase of irrigation amounting to 450,000 acres in a year of drought. The Fatehpur branch canal, which was designed for the protection of the country between Cawnpore and Allahabad, was opened for irrigation in 1898 and has in the past year irrigated an area of 129,000 acres, as compared with the estimated area of 120,000 acres. The Mat branch extension, which was designed for the irrigation of lands on the north bank of the Jumna in the Aligarh and Muttra districts, was opened for irrigation in 1904-05. The development of irrigation on this branch has been most rapid and it has already reached in the past year of drought the areas for which it was designed. For the future the only major extension of this system of canals is the Hathras branch, proposed for the protection of a tract in the Aligarh, Muttra and Agra districts, where spring level has fallen to a

conisderable extent. This branch is estimated to irrigate 109,000 acres annually, and it is hoped that its construction which will cost 18½ lakhs (£123,000) will be undertaken very shortly.

Turning now to what the Irrigation Commission described as the southern tract of the province, *i.e.* that south of the Jumna, the only works of individual importance undertaken in the past ten years in connection with the Agra canal are the Nandgaon distributary, estimated to irrigate 46,000 acres in the south of the Muttra district, and the Fatehpur-Sikri distributary extension, which is under construction and is estimated to irrigate 44,000 acres in the Agra district. A great deal of work has been done in the improvement of the distributary system, but a great deal remains to perfect the whole system and to economize supply by the extension of minor channels to get the water further afield.

The trans-Utangan portion of the Agra district is a small hilly tract protruding between the States of Bhartpur and Dholpur and owing to lack of irrigation subjected to severe distress in every period of famine. In this tract a number of projects have been prepared for tanks and submergence embankments similar to those adopted in Bundelkhand. Some of the smaller works have been completed during the recent famine and others will be constructed from provincial funds in the next working season.

The last area to be dealt with is Bundelkhand. The famine of 1896-97 drew attention to the need of further measures of protection by irrigation in this part of the province. The Betwa canal, then the only work of the "protective" class in the province, had been looked upon as an experiment in the irrigation of the heavier Bundelkhand soils and had not until then fulfilled the expectations formed of it either in financial or protective effect. In that famine it justified its construction and was, in the words of Lord MacDonnell, the salvation of the Jalaun district. The Irrigation Commission emphasised the urgency of proceeding with protective works, both tanks and canals, and in their programme of protective works assessed the requirements of Bundelkhand at 90 lakhs of rupees (£600,000). The whole of this sum has already been utilized on works completed or in progress. On the Betwa canal the past eight years have witnessed a large expansion of work, the necessity of which for the development of the irrigation had not in previous years been adequately recognized. Gates have been erected on the Paricha weir securing 780 million cubic feet more storage volume; the Kuthaund branch and many of its distributaries have been remodelled; and the remodelling of the Hamirpur branch, recently sanctioned by the Government of India, has been largely used as a relief work in the past famine. New distributaries and minors are being constructed, and the remodelling of the remaining channels and construction of further minor

distributaries will now be taken up. Lastly and most important, a new reservoir has been constructed at Dhukwan on the Betwa river which will when fully completed hold 3,400 million cubic feet of water. Erection of the gates on the Paricha weir was at once followed by a marked expansion of irrigation; cultivators are becoming more habituated to taking water for their crops and losing their prejudice to its use on black soils.

Construction of the Ken canal in the Banda district was commenced in 1903 and it was opened for irrigation in September 1907. The results of the first year's work have been satisfactory, but further storage is urgently required if the canal is to be of real protective effect to the large area it serves.

The Dhassan canal has been designed to protect the western portion of the Hamirpur district; construction was commenced in the cold weather of 1905, and good progress has been made. It is anticipated that the canal will be ready for irrigation by the cold weather of 1909.

Further surveys have revealed that a much larger sum is necessary for the complete protection of the southern tract; a revised programme amounting to 240 lakhs (£1,600,000) has been submitted to the Government of India to include extensions of irrigation not only in Bundelkhand proper, but also in other tracts south of the Jumna which are identical with it in their characteristics. The funds available for protective and unproductive works are limited and the Government of India have informed the Local Government that it will not be possible to provide for this programme unless the urgent necessity of the works included in it is fully established, and the projects themselves compare favourably with those which other Local Governments desire to carry out. The extent to which the vicissitudes of the rainfall affect Bundelkhand, the distressed tract for which most of this programme was proposed, is referred to in paragraph 472 of the report of the Irrigation Commission. Since a twenty years' programme for protective works was prepared 4½ years ago on the recommendations of that Commission it has had two visitations of famine. There can be no question as to the urgent necessity of the works: the other question of their promise relatively to those contemplated in other Provinces is being worked out.

One of these works for which an estimate amounting to 14 lakhs (£93,000) has been submitted to the Government of India, is the construction of a storage reservoir for the Ken canal in the Banda district at Gangao, a site 30 miles higher up the river, which will hold a volume of 4,000 million cubic feet. With this supply it is estimated that 150,000 acres will be irrigated annually; this is however only 29 per cent. of the area under command of the canal, and on development of irrigation it may be found desirable to obtain further storage capacity. The soils of the Banda district are generally more suitable for irrigation than those served by the Betwa canal

and there is a good prospect of the Ken canal proving a successful work.

A second project relates to the Dhassan canal in the Hamirpur district. As originally planned the storage volume for which provision was made amounted to 1,100 million cubic feet, but subsequent surveys have shown that this can be increased to 3,500 million cubic feet, irrigating annually an area of 80,000 acres. This addition is of the utmost advantage as the river supply fails entirely in a dry season. It is under consideration to extend this canal across the Barma river to protect portions of the Sumerpur pargana of the Hamirpur district.

The small canal from the Belan river was designed to protect a precarious tract in the south of the Allahabad district, including a portion of the Rewah State. The work was primarily recommended as a famine relief work and was commenced in the present year; but it has been proved that the scheme is in itself more promising than was anticipated; the soils are better than was expected and are suitable both for rice and for spring crops; storage can be obtained higher up the river and there is evidence of the scheme proving a useful "protective" work irrigating annually some 30,000 acres.

In addition to the above projects which concern the larger rivers, a number of reservoir projects have been prospected on the smaller rivers and drainage lines, which appear likely to give valuable protective results. The most important of these are the Pahuj-Garhmao canal and the Itaura reservoir in the Jhansi district, the Kulpahar and Kabrai reservoirs in the Hamirpur district, the Ohen canal in the Banda district and four projects in the Mirzapur district consisting of a system of canals from the Gorai river to protect a rice area in the Bhinti pargana, the Gori river and Sukra river reservoirs, situated in the western part of the distressed area near Lalganj and Hatia, and the Ghagar river project which purposes by damming a tributary of the river Sone to utilize the storage supply thence obtained for the protection of the famine areas which it was originally proposed to feed from the Karamnasa canal, a scheme, now for various reasons abandoned, which would have diverted the Karamnasa river supply into the Belan catchment to protect a portion of the Mirzapur district. All these reservoir works are included in the programme of works submitted to the Government of India and are estimated to irrigate an area of 122,000 acres.

The project of a canal from the river Tons has been abandoned; the cost of the head works and head reach of the canal, involving a long tunnel, proved prohibitive, while the Karchhana tahsil of the Allahabad district which it would serve is fairly supplied with means of irrigation and the outlying areas can be protected by submergence embankments.

Irrigation from tanks has been rapidly extended in the Jhansi district since the institution of a separate tanks division. Fifty-two estimates have been sanctioned for the construction of new tanks and the renewal of works that had fallen into disrepair. Of these 30 have been completed and work is in progress on 14. The total area protected by these works is 26,800 acres. In the Karwi sub-division of the Banda district the tank at Garhchappa, undertaken as a famine work, will protect an area of 1,600 acres.

The history of the development of irrigation in recent years would not be complete without a mention of the field embankments, which have occupied so prominent a place in the narrative of the famine. In many parts of the south Jumna area the value of field embankments for storage of water and preparation of fields for the spring sowings is well appreciated, in others little has hitherto been done by cultivators in this direction, but in the present year the preparation of projects by the Irrigation department was extended from the Banda district to the Jhansi, Jalaun, Hamirpur, Allahabad and Mirzapur districts, and projects have been prepared to protect over 80,000 acres of land. Of these projects 381 were constructed in the course of relief operations and will protect not less than 30,000 acres.

To sum up the position in Bundelkhand and Mirzapur, the projects sanctioned and proposed for canals and reservoirs provide for the irrigation of 390,000 acres, and those for tanks and field embankments for the protection of 110,000 acres.

Experiments are being conducted in parts of the province where there are small rivers, which are not large enough to supply a canal, with a view to utilizing their waters by means of pumping machinery, and it seems very probable that schemes of this nature will in time become common. The idea of using engines to pump and distribute water from wells has been adopted in the Madras Presidency, if not elsewhere also, and has been considered in this province. Here there is this difficulty to be encountered that the wells are not strong enough to admit of the water being economically pumped from them by means of machinery. This defect will, it is hoped, be avoided in wells constructed in the future. Sir John Hewett believes that there is a great future for the use of light machinery for pumping water from both wells and small rivers, and is prepared to make advances on easy terms to landholders or tenants who wish to experiment in either direction.

The extent to which the province was protected in the present year by canal irrigation is apparent from the fact that the total area irrigated by canals in the autumn and the spring of 1907-08 was 3,446,453 acres, of which 1,486,172 acres were irrigated in the autumn and 1,960,281 acres in the spring. This area, as was natural, greatly exceeded

the normal : in the previous year, for instance, 1,083,479 acres were irrigated in the autumn and 1,504,978 in the spring, making a total of 2,588,457 acres. The Meerut division was saved from famine in the present year by reason of its exceptional advantages in the way of irrigation from canals; the area irrigated from canals in that division was 670,499 acres in the autumn and 814,771 acres in the spring or 1,485,270 acres in all, which is only a little less than one-third of the total cultivated area. Many of the districts outside this division affected by famine or scarcity were also protected to a material extent, as is evident from the following table, which shows the area and value of the crops irrigated from canals in them :—

District.	Autumn harvest.		Spring harvest.	
	Area.	Value.	Area.	Value.
	Acres.	Rs.	Acres.	Rs.
Muttra	1,30,382	22,18,688	1,13,169	44,99,861
Agra	41,264	21,78,699	50,682	24,59,417
Etah	64,215	31,05,079	1,06,120	48,95,914
Mainpuri	96,640	44,48,346	1,31,380	53,79,531
Farrukhabad ...	46,246	23,96,025	65,309	28,60,090
Etawah	1,19,261	57,09,721	1,50,192	58,31,587
Cawnpore ...	1,29,385	59,77,561	1,98,734	82,73,497
Fatehpur	25,921	13,53,945	63,271	24,30,417
Allahabad	9,092	4,05,912	25,441	11,34,571
Bijnor	8,786	6,76,838	9,467	5,69,394
Pilibhit	10,409	8,50,670	11,662	3,49,602
Bareilly	36,622	26,95,334	43,416	17,06,836
Banda	26,320	8,65,888	39,937	17,61,698
Jhansi	* 553	13,535	3,989*	1,37,589
Hamirpur ...	795	22,678	3,322	1,74,563
Jalaun	19,412	5,44,482	63,540	11,74,294
Total ...	7,65,303	3,34,63,396	10,79,631	4,36,69,771

* Excluding area irrigated in Tikamgarh State.

In these districts then the value of the irrigated crops amounted to 771½ lakhs of rupees, or considerably more than 5 million pounds sterling.

The operations of the Canal department, however, were greatly hampered by the shortness of the river supplies available, which made it a matter of extreme difficulty to meet the greatly increased demand for irrigation caused by the drought. The supplies of the Ganges and the Jumna rivers were already low in January, but the general rain in that month and a timely fall in February in the Saharanpur and Muzaffarnagar districts eased the situation, and at the end of February the condition of the canal-irrigated crops was generally reported to be good. But in March the river supplies fell still further, the Ganges reaching the lowest point ever recorded, and it was not possible to give a watering during this month to all the crops which required it. As hot west winds prevailed during March, such of the late sown crops as had only received one watering failed almost entirely, while the produce of all that did not succeed in obtaining a watering in that period was lessened in proportion to the amount of water previously received. The shortage of supply was felt to an almost equal extent in all districts,

though the intensity of the hot winds was greatest in the western districts, and the crops at the end of distributary channels and outlying areas suffered most. In consequence it was found necessary in the areas served by the Ganges and Jumna canals to grant remissions of the canal rates in full or in part in 94,992 acres, that is to say in 5·4 per cent. of the irrigated area. These remissions aggregated Rs. 1,95,392 (£13,000). In the Rohilkhand canals, although the low supplies in the rivers restricted the areas of irrigation, the outturn of the crops was not greatly reduced, thanks to the rainfall of January. But on the Betwa canal the shortage of water was more serious. The river supply was from the commencement of the season very low, and only 75,013 acres received water for sowings. The water supply sufficed to give a second watering to less than half this area, and the light soils of the Kuthaund branch, which needed a third watering, were unable to obtain the necessary supply. In consequence 587 acres failed altogether and partial remissions were necessary on 11,810 acres, that is to say on 16 per cent. of the irrigated area. These remissions amounted to Rs. 7,925 (£528). The Dhukwan reservoir which is under construction will, it is hoped, double the water supply available for the Betwa canal, and the difficulties experienced in the present year will to a great extent be avoided in future seasons of drought. The Ken canal was opened for the first time in the present year and no water rates were charged; here, too, low river supplies and a lack of reservoir storage power only admitted of the irrigation of 40,141 acres, of which perhaps one-half received a second watering. The necessity of the second reservoir proposed at Gangao is emphasised by this season's experience.

Of the officers of the Irrigation branch, whose preliminary work has contributed so much to the utility of the operations of the present year, special mention should be made of Mr. M. Nethersole, Superintending Engineer; Mr. G. T. Barlow, Executive Engineer; Mr. B. D'O. Darley, Assistant Engineer; and Saiyid Zafir Husain, Khan Bahadur, in charge of the Tanks division in Bundelkhand.

CHAPTER XVII.

General considerations regarding the condition of the people and the power of resistance displayed by them.

72. The foregoing history of the famine has shown that there was no organized movement of the population from the distressed areas in search of work; no considerable emigration to or immigration from native states, and in fact no noticeable wandering at all. The slight extent to which poorhouse relief was required and the very small number of casual wanderers relieved by the police afford a striking confirmation both of the effectiveness with which gratuitous relief was administered and of the small disturbance which the famine caused in the ordinary conditions of life of the people. The death-rate, though higher than in an ordinary year, was far from excessive considering the extent and severity of the scarcity which prevailed; the ravages of epidemic disease and the mortality indirectly due to scarcity were minimised to an extent unprecedented in seasons of similar distress, while deaths directly due to starvation were almost unknown. The statistics of crime compare favourably with those of the famine period of 1896-97 and there was an entire absence of the violent disorder and lawlessness which not infrequently accompanied the earlier famines of the last century. It may be confidently anticipated that the present famine will not result in any lasting deterioration in cultivation: the autumn harvest has been sown on a full area, and with a few favourable seasons, the major portion of the large amount of suspended revenue and of advances will doubtless be realised without difficulty, and the check to the advancing prosperity of the province given by the calamity of the past year will, it may be hoped, soon pass out of mind.

In estimating the measure of success attained in the administration of relief it should not be forgotten that although the actual failure of the autumn harvest was greater and that of the spring harvest as great as in 1896-97, the province had not suffered from crop failure to the same extent in the years preceding 1907 as in those preceding 1896. At the same time the crop failure of the present year was serious enough to have caused widespread distress if the measures of relief adopted by Government had not been both prompt and liberal. In both famines the high prices of agricultural produce pressed very severely upon the urban population, and the consequent contraction of the ordinary channels of charity made it necessary for Government to undertake the support of those both in towns and in villages who depend in ordinary times upon small fixed incomes or upon the charity of their neighbours: many old and infirm persons,

cripples and beggars, *parda-nashin* women and others who are unable or are unaccustomed to work, were compelled to depend upon Government for their support. In the present year the range of prices was higher and the pressure upon these classes was in consequence considerably greater than in 1896-97, with the result that gratuitous relief was required in the present year both at an earlier stage of the operations and on a larger scale. The previous famine was to a great extent a labourers' famine; in the present year the labouring population did not resort in large numbers to relief works except in the very severely affected districts. Owing to the large advances made in the autumn and the late arrival of the winter rains, there was a much greater and more continuous demand for labour for irrigating the spring crops than in the winter of 1896-97, when the Christmas rains came early over a large part of the province. But the difference between the two years is not entirely explainable by this or by the greater severity of the earlier famine. It points to the fact, which seems beyond dispute, that the position of the labouring classes has improved in the last decade, as is clearly illustrated by the later section of this resolution on the subject of wages of labour. As regards the cultivating classes, even in the previous famine they were seldom compelled to resort to relief works: the pressure of the famine upon these classes was chiefly manifested by the greater extent to which they themselves and their families were compelled to perform field work for which they would ordinarily have employed hired labour. Within the last ten years their position has been further strengthened by the constantly increasing facilities of transport and the high prices obtainable for agricultural produce. An interesting comment on this point is afforded by a missionary in Ghazipur who writes from personal experience that in 1877 people were dying there of starvation with common rice selling at 9¼ sers (19lbs.), while this year there were no signs of serious distress with the same grain selling at 5¼ sers (10¾lbs.) to the rupee. The Famine Commission of 1880 noticed that the price of ordinary grain in this province in the famine of 1877-78 did not rise above 26lbs. for the rupee. It is not too much to say that had prices been the same this year as they were 30 years ago, there would have been no need for relief over the greater part of the area in which famine operations have recently been closed.

73. Although prices have been exceptionally high for several years, the rise has been accompanied by a marked increase in the wages of labour, with the result that the higher price of food does not affect the ordinary labourer so long as he can obtain employment. The amount of employment available has simultaneously increased very considerably by reason of the large expenditure by Government on public works, railways and canals and the industrial and building operations of the

general public. The Director of Land Records and Agriculture has collected information of the wages paid in all rural tracts between October and December 1907, and has compared them with the results of the wage census taken on the same lines in 1906. His conclusions are that the commonest rates of wages paid in the later period were nowhere below, and were in most cases above, those recorded at the wage census, the average rise being not far short of one pice daily. Moreover, wages below the commonest rates were paid much less often than in 1906, whereas wages above the prevailing rates were paid on a considerably greater scale than in 1906, and rates hitherto unknown were paid in some localities. Taking the combined results of these conclusions and allowing for reluctance to state a largely increased rate he estimates that the average wage of the province has increased in the period by two or possibly three pice for each day's work. A labourer, therefore, who in 1906 spent 1½ annas on food, could in the autumn of 1907 spend two anhas on food without curtailing his other expenditure; so that he could get the same amount of food as before if prices were 33⅓ per cent. above the level of prices in 1906 (itself above normal). The rise in the rate of wages was most marked in the upper portion of the tract between the Ganges and the Jumna, the west of Rohilkhand and the bulk of the Benares division and south Oudh; less marked in the submontane tract from Bareilly to Gorakhpur, and still less in the middle and lower portion of the tract between the Ganges and the Jumna and in Bundelkhand.

In the large cities the rise has been even greater than in the rural tracts. In Agra, for instance, men engaged as ordinary diggers earned in 1900 2 annas a day, and women seldom received more than 1 anna 3 pies. At the present time the rate of wages for this kind of work is four annas for men, and 2 annas to 2 annas 6 pies for women. Masons and stone-cutters who in 1900 earned 3 annas 6 pies daily now receive from 5 to 7 annas. In the same period the pay of such classes as gardeners, water-carriers and sweepers has approximately doubled. In 1900 at Agra labour was plentiful, whereas in the present year, owing in part to the emigration of labourers attracted by the offer of higher wages to Bombay, the Punjab and elsewhere, great difficulty has been experienced in securing the necessary labour both for Government works and for local industries.

74. Another cause which has added much to the wealth of the districts in the Benares and Gorakhpur divisions and Eastern Oudh is the increased amount of emigration from those districts. Trans-oceanic emigration to various British colonies and possessions takes place to a considerable extent from several of these districts, especially from Basti and Azamgarh; but it is insignificant in comparison with the temporary migration eastwards to Bengal, Eastern Bengal, Assam and Burma. This

movement was already on a vast scale when the last census was taken in 1901, and it was then observed that the eastward tendency was very much more marked than ten years previously. No less than 497,000 natives of this province were enumerated in Bengal, of whom the vast majority hailed from the Benares and Gorakhpur divisions. Even excluding those enumerated in the districts bordering this province, who represent a local movement rather than real emigration, the number of emigrants exceeded 386,000. There were over 108,000 emigrants in Assam of whom 69,000 were from the Benares division and nearly 43,000 from Ghazipur alone: 67,000, mostly weavers, in Bombay of whom 45,000 were from the Benares division, and 33,000 in Burma. Since 1901 the stream of emigration has become greater every year. Its exact extent is not easy to determine, but it has been said, probably without much exaggeration, that in all the districts of the Benares division, save perhaps Mirzapur, there is not a family of which one member at least is not absent in Bengal or elsewhere. The low-class labourers from these districts perform a large portion of the unskilled labour in the industrial centres of Howrah and Calcutta: men of higher class find employment as door-keepers, messengers and overseers in the mills. In Assam a certain proportion find employment in the tea gardens, but the majority are general labourers, traders and boatmen. The whole of the extensive river traffic of Bengal is in the hands of men from this province. The Collector of Gorakhpur estimates that over 30,000 labourers from that district annually migrate eastwards in search of work in the slack season. The emigrants from Oudh largely take service in the Army or in native states and certain classes, such as the Pasis of the Rae Bareli district, are found in large numbers in the collieries. The emigrants from the Gonda district are not as a rule ordinary labourers, but prefer domestic service: an increasing number emigrate annually to Burma both from that district and from Fyzabad. Besides all this there is a large amount of internal migration within the province, especially from Jaunpur which supplies about half the grooms and grass-cutters from Bengal to the Punjab: the *luniyas* also of Jaunpur are famous and are employed wherever there is earthwork to be done.

A striking confirmation of the extent of the movement is to be found in the increasing amount of money received by the Post Office from abroad for payment within the eastern districts of the province. In Ballia for instance the value of money-orders received has increased from 17 lakhs (£113,000) in 1905 to 18½ (£123,500) in 1906 and 19½ (£130,000) in 1907, as compared with 9½ (£63,300) in 1895-96 and 10¾ (£71,500) in 1896-97. In Jaunpur the rise has been from 14 lakhs (£93,300) in 1903 to 19 (£126,500) in 1907, in Ghazipur from 13½ (£90,000) in 1905 to 15 (£100,000) in 1907, in Azamgarh from 14 (£93,300) in 1903-04 to 18½ (£123,500) in 1906-07 as against

9¾ (£65,000) in 1895-06 and 12⅘ (£85,300) in 1896-97, while for the period from the 1st April 1907 to the 31st March 1908 is no less than 25⅓ lakhs (£170,000). In Sultanpur the average amount of the last three years exceeds 20 lakhs (£133,000). In Fyzabad the money received from Burma alone exceeded 5¼ lakhs (£35,000) between December 1906 and February 1908. Similar figures could be quoted from other districts. The railway returns show the same thing in the immensely increased passenger traffic. In the majority of the districts above mentioned the value of the money-orders received is in excess of the total land revenue demand, which is for instance (cesses being included) in Ballia approximately 7¾ lakhs (£51,650), in Jaunpur 13¾ (£91,650) in Ghazipur 11⅘ (£76,000) in Azamgarh 19⅓ (£129,000) and in Sultanpur 16⅖ lakhs (£109,000). In Benares, the fact that the city possesses several important industries and is frequented by visitors from all parts of the world makes the value of money-orders received from abroad a less valuable index of the extent of emigration, but it is worth mention that the excess of money-orders received for payment over those issued has risen between 1905 and 1907 from 17 lakhs (£113,000) to 22 lakhs (£146,000) in the city and from 3¼ to 4 lakhs (£21,650 to £26,600) in the rural tracts, whereas the land revenue is less than 10 lakhs (£66,600). The result is that in spite of the exceptionally dense population of this part of the province labour is becoming dearer and more independent every year, and to a large extent the cultivating classes no longer depend solely on cultivation.

CHAPTER XVIII.

The cost of the famine. The Famine Code and Accounts Manual.

75. The total expenditure directly incurred in famine relief has been—

	Lakhs.	(£)
In the Public Works department ...	113¾	(758,000)
In the Civil department	94	(627,000)
Total ...	207¾	(1,385,000)

By the expenditure of this money rather more than 219½ million persons have received relief for one day, or 1,220,000 persons for a period of six months, at a rate of 1 anna 6·2 pies (about 1½*d.*) per unit relieved.

In addition to this there are a number of charges, for instance, the money spent on free distribution of quinine, on medical stores for famine hospitals, on extra medical staff, on increases to existing establishment in tahsils and district or divisional offices and on the pay of the special famine accounts staff, which, though due solely to famine, are under the rules of the Financial department entered under ordinary service heads. These charges so far as at present ascertained amount approximately to 1½ lakhs (£10,000). The estimated loss in excise receipts is roughly 15½ lakhs (£103,500); but no considerable reduction is expected in the receipts from income-tax. The losses due to remissions of revenue, remissions of advances and the cost of grain compensation allowances must be added, so that the indirect cost of the famine may be shown as follows :—

	Lakhs.	(£)
Expenditure debited to service heads ...	1½	(10,000)
Loss of excise receipts	15½	(103,500)
Grain compensation allowance ...	5½	(36,000)
Remissions of revenue	77½	(516,500)
Remissions of advances (actual and estimated)	12½	(84,000)
Total ...	112½	750,000

The total cost therefore, direct and indirect, of the famine may be placed at 320¼ lakhs of rupees or £2,135,000.

76. The United Provinces Famine Code was revised in 1905 and embodies the experience gained in the famine of 1896-97 and the recommendations of the Famine Commissions of 1898 and 1901. The Government was also enabled, with the permission of the Government of India, to use in draft form the

Manual of Famine Accounts, which was under preparation by order of the Government of India, in supersession of the rules given in Chapter XVIII of the United Provinces Famine Code. The most important innovation introduced by the Manual of Famine Accounts was the provision for local audit of famine expenditure in the offices of the Collector and of the Executive Engineer. The experience of the present famine has, as was natural, brought to notice a number of points in which the procedure laid down by the Famine Code requires simplification or alteration, and the revision of the Code in the light of the fresh experience gained will shortly be undertaken. It is sufficient in this place to mention that the dual control by the Public Works and Civil departments which the Code enjoins is a matter which requires reconsideration: unity of control and a uniform system of accounts and of audit for all forms of famine relief would appear to be desirable. The system of local audit worked excellently as regards the relief administered by the Civil department; thanks to a very large extent to the excellent trained staff of 30 accountants and 11 test auditors selected and deputed by the Accountant-General, Mr. F. J. Atkinson, whose assistance the Lieutenant-Governor desires to acknowledge most cordially. But the audit of Public Works expenditure left much to be desired, the delay which occurred being due in part to the fact that the Executive Engineer in this province holds charge not of a district but of several districts: and to the dual audit prescribed by paragraphs 43 and 46 of the Manual; but also to defective organization of the audit staff in the offices under control of the Examiner of Public Works Accounts. The solution of this difficulty would appear to be either to audit the Public Works accounts in the District Engineer's office or to audit all famine expenditure in the Collector's office. It may also be mentioned that the Famine Code does not contemplate the necessity which arose in the present famine for gratuitous relief in tracts in which relief works have not been opened, or may not require to be opened at all. The provisions also of the Code regarding civil works had to be somewhat modified, particularly in the Mirzapur district where a system of civil works with relief to dependants was found to be the best solution of the peculiar difficulties presented by that district with its large and inaccessible area and scant population largely composed of aboriginal tribes.

CHAPTER XIX.

The work of the staff and general conclusion.

77. It is not possible to conclude this history of the famine of 1907-08 without a reference to those whose devotion to duty cost them their lives. There is reason for thankfulness in the fact that the roll is smaller than in the last famine. The untimely death of Mr. H. T. Morgan, Collector of the Basti district, was beyond doubt caused by exposure in the supervision of famine relief operations. The same may be said of the death from enteric fever of Mr. A. C. Stern, Assistant Engineer, employed upon the Dhassan canal in the Hamirpur district. The cholera epidemics in the Mirzapur, Bahraich and Kheri districts also claimed several victims among those in Government service, including Thakur Pershad, naib tahsildar, and Babu Ram Richpal, Public Works department travelling auditor, in the Mirzapur district; Munshi Akbar Ali, naib tahsildar, and Babu Atma Ram, a retired hospital assistant, engaged for famine duty, in the Bahraich district; M. Ala-ud-din, circle officer and Babu Kanhaiya Lal, work agent, in the Kheri district.

The Lieutenant-Governor has much pleasure in acknowledging the excellent work done by the staff both European and Indian of all grades. With scarcely an exception they have worked under the most trying conditions with the utmost devotion and the Lieutenant-Governor wishes those whose names are not mentioned in this resolution to understand that while only the names of the most meritorious are specially mentioned, the services of all employed on famine relief are recognized and appreciated by the Government. The names of the officers of the Public Works, Medical and Forest departments, who have been selected for special mention, have been entered in the appropriate paragraphs of the resolution which deal with the works which they undertook. It remains only to recognize the services of the civil staff, upon whom fell the heaviest portion of the general work of supervision and administration.

The appointment of Mr. J. S. Campbell, C.I.E., as Famine Commissioner is of special interest. The appointment of a Famine Commissioner has been recommended by all Famine Commissions since 1880, but this is the first occasion on which a whole-time officer has been appointed to such a post. The powers conferred on Mr. Campbell were of the widest possible description subject to the general control of the Lieutenant-

Governor. He was on the other hand relieved of all concern with estimates and allotments of funds, as it was thought that such work might be delayed at headquarters during his absence on tour. The results of the appointment have been an unqualified success. The unanimous opinion of all those divisional Commissioners under whose charge relief measures on any large scale were undertaken is that at his frequent visits to individual districts and his constant conferences with famine officers at divisional centres, the Famine Commissioner made a full use of his wider experience of the relief measures. The Lieutenant-Governor has been much gratified by the spontaneous appreciation that has reached him from many district officers of the assistance and encouragement given to them by the Famine Commissioner. He was in constant personal and demi-official communication with the Lieutenant-Governor and every matter of any consequence was decided by them directly. Mr. Campbell was able to introduce a uniform and logical policy in the conduct of relief; he solved promptly with little correspondence the numerous difficulties, which arose locally, by his knowledge of the solutions of similar difficulties elsewhere. He practised a prompt and summary treatment of all questions by demi-official letters, and thus reduced official and routine correspondence to a minimum. More than one of the divisional Commissioners have expressed the opinion that the appointment of an experienced officer as Famine Commissioner, who—as was the case on the present occasion—has ready access at all times to the head of the Government is preferable to the system under which the Lieutenant-Governor is himself his own Famine Commissioner. The special officer can devote his whole time to the work and by constant tours and meetings with local officers can find out the real difficulties and real successes of the measures undertaken. The Lieutenant-Governor cordially agrees with these opinions. He considers that the appointment of Mr. Campbell as Famine Commissioner greatly increased efficiency and had a most direct effect on economy. The appointment of a Famine Commissioner does not indeed relieve the head of the Local Government of any responsibility, nor does it relieve him personally of very much work, but it certainly, by making the disposal of questions relating to famine administration more prompt, reduces the time that has to be given to such work, and, since each case comes to the Lieutenant-Governor from an officer with personal experience of the problem on which a decision is required, the issues are presented to him more clearly and exactly than would be possible were they put before him by a Secretary. There is another great practical advantage in the appointment of a Famine Commissioner. It is essential that works and poorhouses in different districts should be inspected from time to time by some authority outside the divisional Commissioner and the district officer. The visit of the Lieutenant-

Governor to famine works is apt to cause a flutter among the working staff, which prevents them from doing justice to themselves when inspected by him. Moreover it is almost impossible for him to visit a work without the fact of his approaching visit becoming known before hand. The inspections of the Famine Commissioner were made in such circumstances that finding the arrangements in their normal state, he was able to make the most effective arrangements for improving them and they were not only more frequent but far more efficient than similar inspections by the head of the Local Government. Sir John Hewett anticipated great benefits from the appointment of a Famine Commissioner. These anticipations have been more than realised, and he can confidently assert that Mr. Campbell's personal qualifications for the post, his tactful and sympathetic treatment of all difficulties and his untiring energy at all seasons of the year, have contributed more than anything else to the successful results of the administration of the famine that has just ceased. Mr. Campbell visited all the worst famine districts four and five times and travelled over 14,000 miles by train and motor car for the purpose. The only suggestion for future use which may be made is that such an officer might have a somewhat increased office staff and might scrutinize all estimates of expenditure, including those of the Public Works department; that department, as well as the civil staff, requires special oversight during a famine and the Famine Commissioner is undoubtedly the authority best qualified to determine where their operations stand in need of improvement or correction.

The Lieutenant-Governor has received much good counsel and advice during the famine from the Chief Secretaries, Mr. J. M. Holms, C.S.I., and the Hon'ble Mr. J. W. Hose, and from the late Mr. E. Ducane Smithe, Chief Engineer in the Buildings and Roads branch, whose death just before the operations closed he deeply regrets. Mr. A. C. McWatters has been employed in the special appointment of Under Secretary in the Scarcity department, the duties of which he has carried out most efficiently. He displayed much industry and skill in the collection and arrangement of the materials for this account of the famine.

Of the Commissioners of divisions special mention must be made of Mr. J. A. Broun and Mr. H. V. Lovett, upon whom fell the important charge of the Fyzabad and Benares divisions, and of Mr. G. Bower, now Officiating Commissioner of Rohilkhand, for his services during the greater part of the famine as Deputy Commissioner of the Sitapur district.

Among district officers special recognition is due to Mr. P. Wyndham in Mirzapur, Mr. H. Spencer in Bahraich, Mr. R. Burn in Gonda, Mr. C. A. C. Streatfeild in Jaunpur, Mr. R. L. H. Clarke in Jalaun, Mr. G. B. Lambert in Banda and Mr. J. C. Faunthorpe in Kheri.

Of the junior members of the Indian Civil Service, Mr. C. L. Alexander in charge of the Family Domains of the Maharaja of Benares in Mirzapur, Mr. E. A. H. Blunt in charge of the Karwi sub-division of Banda, and Mr. G. G. Sim in the Gonda district did specially good work.

Among Deputy Collectors and Officiating Deputy Collectors the following have been selected for special mention: in Bareilly Babu Jhumak Lal; in Budaun Rai Bahadur Radha Raman and Mir Ab-ul Hasan; in Etawah Babu Hargobind Singh and M. Ram Parshad; in Agra M. Muhammad Nur-ul Hasan Khan; in Fatehpur Babu Rang Bahadur Varma; in Cawnpore Babu Ram Chand; in Jalaun M. Muhammad Matin-uz-zaman Khan and Babu Ram Saran Das; in Jhansi M. Mahabir Prasad; in Hamirpur Maulvi Muhammad Mati-ullah Khan and Muhammad Ala-ul Hasan; in Banda M. Abdul Hamid Khan and M. Gada Husain; in Mirzapur M. Ibn Ali; in Jaunpur M. Sunahri Lal; in Basti Pandit Lachhman Sita Ram Kher and M. Muhammad Fasih; in Sitapur M. Kunj Behari Lal; in Hardoi Pandit Sheo Charan Lal Pathak; in Kheri Chaudhri Wajid Husain, Pandit Bishambar Nath and Thakur Lekhraj Singh; in Bara Banki Khan Bahadur Maulvi Muhammad Fasih-ud-din; in Fyzabad Kunwar Kampta Parshad; in Sultanpur Pandit Salig Ram Tewari; in Gonda Mirza Yaqub Husain, M. Ghani Muhammad Khan, Saiyid Zain-ul-ibad and M. Zamin Husain; and in Bahraich B. Gur Prasad, B. Sitla Bakhsh, Shaikh Muhammad Wahaj-ud-din and Shaikh Muhammad Mosanna.

Among tahsildars the best work was done by Thakur Sheo Bakhsh Singh in Dehra Dun; Pandit Chakra Dhar in Garhwal; B. Bhagwat Das Varma, M. Muhammad Karim and Thakur Bishnath Singh in Allahabad; Pandit Raj Bahadur in Fatehpur; M. Muhammad Idris in Jhansi; Saiyid Ahmad Husain Khan and B. Brij Bahadur Singh in Hamirpur; M. Muhammad Maqbul Husain, Thakur Laiq Singh and M. Inayat Husain in Banda; Maulvi Abdur Rabb in Azamgarh, B. Gopinath in Sitapur; M. Bakar Husain and Pandit Bansi Dhar in Gonda; Mr. E. Thomas and Pandit Kashi Narayan Sheopuri in Bahraich. Special commendation is also due to M. Lachman Sarup, Superintendent of the Government Estate at Dudhi in the Mirzapur district.

Among charge and circle officers the following have been selected for special commendation: M. Ahmad Mirza and M. Abdul Hai in Jalaun; M. Muhammad Ahmad, M. Muhammad Yaqub Khan and Thakur Phul Singh in Banda; B. Mahadeo Prasad in Jaunpur; Thakur Raghunandan Singh, M. Niamat-ullah Khan and M. Ahmad Hassan Khan in Bahraich; M. Muhammad Adil Khan and B. Narendra Bahadur in Gonda; M. Jugul Behari in Mirzapur; B. Ram Sarup in the Family Domains, Mirzapur, and M. Asghar Husain, *sarbarahkar* of the Court of Wards in Sultanpur.

78. The history of the famine, of the operations undertaken to relieve it, and of their results has now been told. Each succeeding famine has given birth to some new problems, and presented some fresh and unexpected situations, and this last one has not been different from its predecessors in this respect. But if the operations for its relief have been conducted to a successful issue, this result is mainly due to the experience gained in previous famines, and particularly to the close observance of the main principles laid down by the Government of India on a consideration of the report of Lord MacDonnell's Commission. The directions for the conduct of a famine campaign embodied in the Famine Code set a clear course to the Local Government and its officers a number of whom had also gained personal experience of famine work in the operations of 1896-97. Their labours were greatly lightened by the support and encouragement given to the Local Government by the Government of India throughout the operations. The Lieutenant-Governor is also under deep obligations to His Excellency the Commander-in-Chief in India for the generous assistance given in the loan of military officers to assist the civil authorities. The aid to the administration given by non-official helpers certainly equalled and probably exceeded that given in any previous famine. Those on whose behalf the work of relief was undertaken are reported on all sides to be most grateful to the Government for the help that has been given to them. The expression of this feeling has been probably more articulate than on previous occasions and opinion is unanimous that they are not only grateful but also contented. There is every hope that the effects of the affliction through which they have passed will be only evanescent. The general verdict is that the trial through which the province has just passed has served to bring all classes into closer sympathy both with each other and with the Government. With this pleasing reflection this account of the famine may well be closed.

ORDER.—Ordered that a copy of this Resolution be submitted to the Government of India, Revenue and Agricultural Department.

Ordered also that a copy be published in the *Government Gazette*, United Provinces, for general information.

J. W. HOSE,

Chief Secretary to Government,
United Provinces of Agra and Oudh.

No. 1636—143-2.

FROM

R. W. CARLYLE, ESQ., I.C.S., C.I.E.,

SECRETARY TO THE GOVERNMENT OF INDIA,

To

THE CHIEF SECRETARY TO GOVERNMENT,

UNITED PROVINCES.

Calcutta, the 11th November 1908.

DEPT. OF REV. & AGRI.
Famine.

SIR,

I AM directed to acknowledge the receipt of your letter No. 2022, dated the 16th October 1908, with which you forwarded, for the information of the Government of India, a copy of a Resolution on the administration of famine relief in the United Provinces during the year 1907-08.

2. The Government of India desire to express without delay their appreciation of the manner in which the operations were conducted, of the promptitude and foresight which were displayed, and of the smoothness with which the whole organisation worked under the Lieutenant-Governor's direction. They are specially pleased to notice the increasing extent to which the operations conducted by official agency were seconded on this occasion by non-official workers. The co-operation of landholders in the measures of relief also calls for special notice, particularly the valuable assistance afforded by the Maharaja of Balrampur in making himself responsible for the organisation of relief throughout the greater part of the operations in his extensive estates, which are situated in a tract where famine was specially severe.

3. The Governor General in Council trusts that favourable harvests may now secure for the people of the Province as a whole a rapid recovery from the distress of the past year, but he is aware that there are tracts which still require careful watching, and which will continue for some time longer to cause anxiety owing to the partial failure of the late rains.

4. Each famine brings its own problems and the conditions with which the Government of the United Provinces had to deal in 1907-08 were to some extent different from those of the last great famine in 1896-97. The Government of India propose to reserve for a later occasion any remarks which they may have to make regarding the details of the administration, but they have been impressed throughout by the manner in which all difficulties were foreseen and provided for in advance, by the absence of all sign of disorganisation or demoralisation among the people, and by the confidence and courage which the people themselves displayed in struggling against the difficulties of drought.

5. I am also to acknowledge the promptness with which and the admirable manner in which the history of the famine operations has been prepared.

I have the honour to be,

SIR,

Your most obedient servant,

R. W. CARLYLE,

Secretary to the Government of India.

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